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Epistemology (episteme, *knowledge;* and logos, *science*) means "The Science of Knowledge." It sets forth the reasons why human knowledge is valid. Being a science, it will investigate the causes: whether the intellect can attain certain knowledge. Why? How? When? etc.

Epistemology, then, is "The science which sets forth and establishes the existence of true and certain human knowledge, the means of acquiring such knowledge, and the norm by which we can distinguish such knowledge from falsity."

In Formal Logic we considered merely the *correctness* of our thought operations. In Epistemology, we shall consider the *truth* of thought, *i.e.*, its conformity with the object it represents.

Moreover, Formal Logic studies only the progress of thought from judgment to judgment in the process of drawing conclusions. But this is of no avail to go forward in knowledge, unless we can accept the matter of the separate judgments as true. Epistemology deals with the matter of thought, *i.e.*, thought in reference to what is thought about, and for this reason Epistemology is sometimes called "Material Logic." It is also called "Critical Logic," or "Critics," or "Criteriology," because it establishes the standard or test or norm in determining the representative value of thought, in determining what is true and what is false.

The material object or subject-matter of Epistemology is the operations of the intellect; while the truth and certitude of intellectual operations constitute the formal object.

In regard to the attainment and possession of truth (the agreement of thought with its object), the intel-

lect must be in one of these five states: either (1) it pronounces a false judgment; or (2) it has no knowledge of the subject; or (3) it has some knowledge, but hesitates to judge; or (4) it judges, but not with firmness and security; or (5) it judges with firmness and security. In the first case, we have *error;* in the second, *ignorance;* in the third, *doubt;* in the fourth, *opinion;* in the fifth, *certitude.*

Error (falsity) is the positive difformity or disagreement of the thought with the object, and consists in affirming what should not be affirmed or denying what should not be denied.

Ignorance is the absence of knowledge in a subject capable of possessing such knowledge.

Ignorance is *privative,* if the knowledge ought to be possessed, *e.g.,* a judge's ignorance of law; otherwise the ignorance is *negative, e.g.,* a laborer's ignorance of calculus.

Ignorance is *invincible,* when it can in no way be removed; *vincible,* when it can be removed.

Ignorance is the absence of knowledge, but does not imply the formation of a judgment about the matter of which one is ignorant; whereas *error* implies the further step of forming a judgment, and that judgment a mistaken one. Thus, error implies the presence of ignorance and arises from it.

Doubt is the state of the intellect suspending its assent for fear of error. In other words, it is the wavering between assent and dissent, the attitude of the intellect towards a judgment which it is unable either to affirm or to deny. Deliberate doubt always implies a judgment or judgments about the reasons for and against; together with the absence of any judgment about the main subject under consideration.

Opinion is the assent to one of two contradictory

judgments, with more or less fear of error. That is, there is hesitancy or insecurity in forming such a judgment. It is the attitude of the intellect towards a judgment to which one inclines, and to which one assents provisionally as more or less likely to be true. In this case, one is not sure, not convinced that he has reached the truth, and so recognizes the possibility that he might be mistaken. Though in opinion the thought might be in agreement with the object, opinion is, however, compatible with error.

We sometimes speak of a *probable* cause, a probable effect, a probability, etc., meaning that there are for said cause, effect, etc., reasons weighty enough to justify one in forming an opinion. *Probability* means likelihood, approach to truth, provable. It refers to the object and produces opinion. But, by a transfer of terms, we sometimes apply the word "probable" to the opinion itself, *i.e.*, to the state of intellect inclining, for reasons, to a probable proposition. We speak of a probable opinion, a very probable opinion, etc.

In other words, probability is the weight of reasons which move the intellect to form a prudent opinion. An opinion which lacks a weighty reason is called *improbable.* An opinion is *prudent,* when the motives of assent are maturely considered and the adherence of the intellect is proportioned to the motives. If the reasons are not sufficiently weighed, or the assent is greater than the reasons warrant, the opinion is said to be *imprudent* or rash.

As we implied above, probability is susceptible of degrees. A proposition can, for instance, be most probable. Its contradictory is then improbable or but slightly probable, and to admit it would be imprudent. Of two contradictory propositions, one can be more

probable than the other, or both can be equally probable. But the less probable proposition does not cease to be solidly probable, if the reasons which militate in its favor are such, that, in spite of reasons alleged on the other side, they are still unshaken and capable of determining the intellect of a prudent man to assent.

When, in opinion, the fear of error is so trifling as to be practically negligible, our assent is commonly described as *practical* certitude. On the other hand, when our fear of error in assenting to a judgment is exceedingly great, our attitude is called a mere *suspicion,* rather than an opinion.

Certitude is the firm assent to a truth without fear of error. The intellect forms a judgment unreservedly and fearlessly. In this state the intellect reposes, convinced that it is in possession of truth.

The term "certitude" (*certum,* for *cretum,* from *cerno*) is from a root meaning to judge, to decide, after sifting, discerning the evidence. It therefore implies decision, finality, settlement.

Clarke, *Logic,* p. 415; Coffey, *The Science of Logic,* vol. 2, p. 211; Dubray, *Intro. Phil.,* p. 366; Jouin, *Logic and Metaphysics,* p. 39; Poland, *The Truth of Thought,* p. 84; Rickaby, *First Principles,* p. 42; Rother, *Certitude,* p. 1; Shallo, *Schol. Phil.,* p. 95.

PART I

Existence and Nature of Truth and Certitude

THESIS I

"Universal Scepticism Is Absolutely Impossible"

No one denies that all men spontaneously hold many things as certain. But the question arises: Is this state of intellect called "certitude" ever justified? Does reflection justify certitude?

Since the fact of spontaneous certitude must be admitted, Epistemology does not aim at the acquisition of certitude, but merely defends and explains the foundations of this spontaneous certitude. We may, indeed, distinguish between spontaneous and philosophical certitude, though the latter does not differ in kind from the former. It is spontaneous certitude made so clear by reflection and analysis of motives, that the philosopher is able to assign a reason for the certitude he possesses.

Spontaneous (natural, direct) **certitude** is that certitude which, although it supposes a knowledge of the motives and a sufficient attention to them to exclude prudent fear of error, still, it is not such as either to give an explicit and distinct account of the value of the motives, or to solve difficulties. The intellect attends explicitly, directly, to the truth of the thing, and only implicitly to the motives of assent. The in-

tellect is determined to such firm assent either by the immediate evidence of the truth, or by easy deduction. Thus, we might be certain that a stone is hard without being able to give a scientific reason for the fact.

Philosophical (reflex, scientific, epistemological) **certitude** is that certitude which is obtained from a reflex and explicit consideration of the motives of assent. It is the state of intellect following the satisfactory investigation of the motives upon which the spontaneous certitude was based. In many cases, reflection shows that the motives are valid; while at times, reflection might show that a previous firm assent was not genuine certitude at all.

As we said above, these certitudes are not essentially, but only accidently different. Hence, the question about the value of spontaneous certitude coincides with the question about the possibility and existence of philosophical certitude.

Scepticism (from skepsis, ***hesitation, doubt***) is the doubt or denial of the total or partial possibility of attaining certitude; the doubt or denial of all or some legitimate motive or principle of certitude. Hence, *sceptics* are those who doubt or deny the total or partial possibility of attaining certitude.

N.B.—Here we speak of real, positive doubt, *i.e.*, the suspense of assent for serious reasons, to distinguish scepticism from *methodic* doubt, which will be considered in the next thesis. On the one hand, the intellect is naturally drawn towards certitude; and, on the other, there are reasons which, according to the sceptics, prevent us from giving a firm assent.

Universal scepticism is the doubt or denial that certitude can be obtained about anything whatever. Universal sceptics doubt or deny the possibility of attaining certitude by any of our faculties or in any branch of knowledge. According to them, no certitude can be justified.

Partial scepticism is the doubt or denial that certitude can be obtained in a certain class of subjects, *e.g.,* Materialists deny the certainty of any suprasensible knowledge.

Absolutely impossible, *i.e.,* self-contradictory. A proposition, for instance, is self-contradictory when it implicitly affirms what it explicitly denies, or implicitly denies what it explicitly affirms.

Ancient sceptics:

Protagoras (480 B.C.) held the doctrine that nothing *is,* but everything is *becoming;* that objective, absolute truth is unattainable; that all truth is *relative* to the individual knower; that what *appears* to him is true for *him;* that, for this reason, it follows that a proposition and its contradictory are equally true, if they appear to different minds to be true. His famous saying was: "Man is the measure of all things." Protagoras was not himself a sceptic, but his doctrine paved the way for scepticism.

Pyrrho of Elis (360 B.C.) held that men should abstain from pronouncing on anything. He taught that sense-knowledge can give us no reliable insight into things as they are in themselves, because of their constant flux and instability, or even as they appear to us, inasmuch as our senses often deceive us; nor can reason give us certitude, because reasons are always forthcoming for and against every contention; therefore the right course is to *suspend our assent* and so attain to

that equal tranquillity of soul which is man's greatest good.

The **Academicians,** under the leadership of **Arcesilaus** (315-240 B.C.) and **Carneades** (213-129 B.C.) held that certitude is an illusion, that only a probable assent is possible. According to them, perception, the standard of truth, may be irresistibly false; hence, unreserved assent must be withheld.

Ænesidemus (flourished 80-50 B.C.), **Agrippa** (lived about a century after Ænesidemus) and **Sextus Empiricus** (A.D. 300) systematized scepticism, and gave reasons for doubting. The reasons of Agrippa are: (1) the conflicting views of philosophers; (2) the relativity of all sense-representations; (3) the inevident character of the statements put forth as principles by the dogmatists; (4) the infinite regress in demonstration; (5) the unavoidable vicious circle in demonstration.

The most noted of the modern leaders of scepticism:

Michel de Montaigne (1553-1592) claimed that the greatest evil was the fact that men thought not only that they possessed certitude, but that they could ever attain it. (*Apologie de Raymond Sabundinus.*)

Pierre Charron (1541-1603), in a book, *La Sagesse,* acknowledges in us an inborn desire for truth, but denies us the sufficient means to reach the truth.

Francisco Sanchez (1562-1632) resolved to reflect within himself, to take an attitude of universal doubt, and to examine everything, as if nothing had ever been said about anything; but the more he investigated, the more he doubted. He came to the conclusion that nothing is known, that only faith solves doubt and gives truth. (*On the Very Noble and Universal Science that Nothing is Known.*)

Francois La Mothe-le-Vayer (1588-1672) endeav-

ors to undermine all certitude except the one based on divine revelation, and sums up his thought in these words: "Of the most certain things, the most certain is doubt." (*Thirty-one Sceptic Problems; On the Little Certitude in History.*)

Joseph Glanville (1636-1680): "Outside of Christian faith no true certitude can be reached." (*The Vanity of Dogmatizing; Scientific Scepticism.*)

Pierre Bayle (1646-1706) granted to human reason only the power to detect error, not the faculty of knowing truth with certitude. (*Letter to Father de Tournemine.*)

Pierre Daniel Huet (1630-1721): In the natural order, reason is impotent; faith alone being the means to arrive at certitude; without faith everything becomes doubtful, even the first truths. (*Evangelical Demonstration; On the Weakness of the Human Mind; Questions of the Agreement of Reason and Faith.*)

Theodore Jouffroy (1796-1841) considered scepticism invincible, and claimed that at the basis of all our beliefs there lies "an act of faith, blind but irresistible, in the capacity of the mind to discover truth." (*Mélanges Philosophiques.*)

N.B.—These modern writers, however, are not sceptics in the sense of adopting the negative attitude of the ancient sceptics, that assent should remain suspended, that no judgment should be affirmed or denied. While calling in question the capacity of the *intellect* or *reason* to reach truth, and contending that the purely intellectual grounds within the reach of *natural reason are insufficient* for certitude, they endeavor to base certitude on non-intellectual grounds, such as "reasons of the heart," "divine revelation," etc. Thus their doctrines are sceptical in tendency and in effect.[1]

[1] Cofley, *Epistem.*, vol. 1, p. 140.

Proof of the thesis: What involves a contradiction is absolutely impossible. But universal scepticism involves a contradiction. Therefore—

Min.: For a universal sceptic, if such existed, would, at the same time, doubt and not doubt about all things.

(a) He would doubt about all things, else he would not be a universal sceptic.

(b) He would not doubt about all things, for one who positively doubts, doubts that he might avoid error. Therefore he supposes as certain that he can distinguish between truth and error, that he can err, that he must doubt lest he fall into error, etc.

Doubt itself is a proof of the existence of certitude. For, when in doubt, the intellect is not at rest as in the case of ignorance, but hovers between two at least apparently contradictory judgments. Such a state is impossible, unless the intellect sees that the contradictories cannot both be true or false at the same time. One who deliberately doubts, necessarily sees and judges that to him neither judgment appears impossible. By saying: "I doubt," either I say nothing and merely utter words, or I affirm something as certain, namely, that as far as I know, the thing is either true or not, but I am unable now to decide.

N.B.—"Proving" means "making evident." A *direct proof* (demonstration) is one that shows from certain positive principles respecting a fact that the fact is so; while an *indirect proof* is one which makes a fact evident by showing the absurdity or impossibility

of the contradictory, *i.e.*, by showing that to suppose the fact to be false would involve the person in a contradiction or absurdity. Moreover, though "proof" is very commonly used in the sense of demonstration, we must not think that nothing is to be admitted without being proved by demonstration. If this were the case, we would never be able to establish the existence of anything, as will be seen in our next thesis. Remember that *proof* is the same as *evidence;* and as evidence is immediate and mediate, so also is proof immediate and mediate.

The proof against universal scepticism and in favor of the existence of certitude is only *indirect,* otherwise we would be guilty of a "vicious circle," we would be begging the question. Nor do we propose to dispute with or convince the universal sceptic. With him no argument is possible. Since he admits nothing, he places himself beyond all range of discussion, which necessarily supposes certain truths admitted by all as the basis of discussion.

Cor. 1: As is evident, a universal sceptic never existed and never will exist. Hence, those who are classed as universal sceptics really did not doubt about everything, though they might claim to do so. Even Hume confesses: "I dine, I play a game of backgammon, I converse, and am happy with my friends, and when after three or four hours of amusement, I would return to these speculations, they seem so cold, so strained, and so ridiculous, that I cannot find it in my heart to enter into them any farther. Here, then, I find myself absolutely and necessarily determined to live, and talk, and act, like other people in the common affairs of life."[1]

[1] *Treatise of Human Nature,* vol. 1, p. 467.

The reasons upon which the sceptics of history based their doubt will be considered and answered in the theses about the sources of knowledge.

Cor. 2: Universal scepticism is an utter impossibility. Therefore, since we cannot doubt about everything, we can know something with certitude. Therefore we have a faculty whose *nature* is to know with certitude, else we could always distrust that faculty, and doubt about everything. This faculty we call the intellect. Therefore the intellect is of its nature infallible, *i.e.,* acting only according to its nature, it always tends towards truth.

Cor. 3: If the intellect were of its nature fallible, we could always doubt its judgments, for the nature of the intellect is always the same. On the other hand, if the intellect cannot doubt about everything, there is at least one judgment regarding which it is of its nature infallible. But if it is of its nature infallible as regards at least one judgment, it is infallible, *as far as its nature is concerned,* in regard to all judgments, for the nature of the intellect remains the same. The finiteness of our intellect merely demands that our knowledge be limited, not that our intellect be of its nature fallible.

Schol. 1: The existence of error is an undeniable fact. But this does not prove that error is inevitable or that the human intellect is naturally deceptive. It merely proves that we should be prudent in giving our unreserved assent. Moreover, *error supposes truth.* Since these two are correlative, if nothing is true, nothing is false. If sometimes a man recognizes that he errs, it is a sign that sometimes also he knows that he does not err.

Though there are many contradictions among men, there is agreement on certain general principles, axioms and facts.

Schol. 2: Some sources of error are: (1) prejudices (prejudgments); (2) the limitations of our intellect; (3) lack of attention; (4) confusion of ideas; (5) lack of logic; (6) influence of the will; etc.

THESIS II

"Universal Methodic Doubt Renders All Demonstration Impossible, and Leads to Universal Scepticism"

Method is the order to be observed in any series of operations to attain a definite end. Here, *method* has reference to thought, and means the order which the intellect should observe in its operations for the purpose of attaining certitude.

Methodic doubt is had when a person is really certain about some truth or fact, but prescinds from this certitude, *i.e.*, acts as though he were not certain, so as to discover truth systematically and *scientifically*. Sceptics make doubt their final goal; they doubt and stop there. In the present thesis, doubt is called *methodic*, as being only a way to attain certitude.

Universal methodic doubt is fictitious or simulated doubt about everything.

Demonstration is the deducing of a new truth from two truths known as certain and evident, by the comparison of two ideas with the same third idea whereby the certain identity or diversity of the two ideas with each other is perceived. Briefly, demonstration is the legitimate argumentation from principles (premises) of whose truth we are certain.

Rene Descartes (1596-1650) advocated this universal methodic or simulated doubt (called also Cartesian doubt) as the beginning of philosophical thinking.

He says: "Not that in my mind I imitated the Sceptics who doubt only that they may doubt and seek nothing beyond uncertainty itself; for, on the contrary, my design was simply to find ground of assurance, and cast aside the loose earth and sand that I may reach the rock or clay." (Method III.)

Descartes resolved to call in question all the principles and conclusions of science and philosophy. The reason which Descartes assigned for the adoption of the methodic doubt is that any other state of mind would expose one to the danger of building upon false principles. For, he said, the mind assented to many things that were false; it was led into error by the senses, by false reasoning, and by the words of other men; and hence we must begin by doubting all the information that comes from these sources. Even the simplest and clearest truths are not free from suspicion. (Medit. I.) What remains intact? One thing only, the fact of my thought itself. But if I think, it is because I exist, for from the one to the other of these terms we pass by simple inspection. We cannot suppose that that which thinks does not exist at the very time that it is thinking. And therefore the thought: "I think, therefore I exist" (*cogito, ergo sum*), is the first and most certain of all truths. Further, a criterion or rule of certainty is required, and by studying the one unassailable truth, this criterion is discovered to consist in a peculiar clearness of apprehension. I am indubitably certain of my own existence, because I clearly perceive that my doubt or thought involves it. Whatever, then, I have a clear and distinct idea of is to be considered true.

N.B.—(1) Descartes did not doubt the testimony of consciousness.

(2) What Descartes doubted in regard to reason was not the capacity of reason to attain truth (Method II.), but the results of reasoning; though he was illogical in claiming that his own and other men's reasoning had brought forth doubtful conclusions alone. This would argue inherent vitiation of the faculty itself.[1]

Some contradictions of Descartes:

(1) Though Descartes advocated only methodic doubt, his attitude was, as a matter of fact, that of a real doubter; his doubt arising, as he himself says: "from cogent and maturely considered reasons." (Medit. I.)

(2) Making use of his reason to supply arguments to overthrow the trustworthiness of the same reason, he at the same time trusted and did not trust his own reason. Moreover, if he had determined to discredit as positively doubtful all the deliverances of his reason or of his intellectual consciousness, which is the same faculty, how could he consistently trust his reason, *i.e.*, his consciousness, when it revealed to him his own existence?

(3) He doubted the simplest and most self-evident truths, and yet he relied upon them, *e.g.*, the principle of contradiction, etc., when he judged: "I think, therefore I exist."

(4) If he accepted and utilized immediate judgments only as subjective mental synthesis, while doubting about their objectivity and truth, what right had he to claim anything more than the same *purely subjective significance* for his judgment: "I exist" (I think, therefore I exist)?[2]

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[1] Mahony, *Cartesianism*, passim.
[2] Coffey, *Epistem.*, vol. 1, p. 112; Mahony, *Cartesianism.*

Proof of the first part of the thesis: What prescinds from the certitude of all premises in demonstration, renders all demonstration impossible. But universal methodic doubt prescinds from the certitude of all premises in demonstration. Therefore—

Maj.: The premises of the first demonstration are doubtful, and from doubtful premises we can never obtain *certain* conclusions. Moreover, our inquiry would be endless.

Proof of the second part of the thesis: If universal methodic doubt requires us to doubt seriously even about principles and facts that are self-evident, universal methodic doubt leads to universal scepticism. But universal methodic doubt requires us to doubt seriously even about principles and facts that are self-evident. Therefore—

Maj.: Supposing this doubt were possible, there would be no means of getting rid of the doubt; and even if there were a means, we would have to doubt whether it existed. Even Hume noticed "that the Cartesian Doubt, were it even possible, as it plainly is not, would be entirely incurable, and no reasoning could ever bring us to a state of assurance on any subject."[1]

Schol. 1: Therefore universal methodic doubt cannot be admitted as the starting point of philosophic inquiry. We cannot take up this questioning attitude in regard to *all* our judgments. For in some cases (*e.g.*, in such as are immediately evident), the immediate and cogent evidence of their truth is actually present to our intellects. And, consequently, we do not need to treat them as doubtful, to treat them methodically. Indeed, what is immediately evident cannot be doubted either

[1] Rickaby, *First Principles*, p. 113.

really or methodically. Such truths are stated, explained and evolved. We have recourse to the method of regarding a judgment as doubtful only in order to demonstrate it, *i.e.,* to bring before our intellects the reasons for its truth; but in the case of cogent, self-evident judgments those reasons are already present to the intellect. Hence, it would be absurd to expect a demonstration of self-evident truths. We do not, however, assent blindly to such truths, but because of their self-evidence. *Nothing, indeed, should be admitted without a reason;* but every reason need not be sought from some extrinsic object. For the strongest reason arises from the immediate evidence of the thing in question.

Schol. 2: A methodic doubt, *not universal,* however, had, long before Descartes, been employed in investigating and demonstrating the truth of individual judgments. Aristotle, in the Third Book of his Metaphysics, recommended that, in order to reach a definite solution of any question, we should begin by doubting, by inquiring into all the difficulties involved in it, the pros and cons of the question. Again, St. Augustine employed it in his dialogue with Evodius (*De Lib. Arb.,* bk. 2, ch. 2); while with St. Thomas and the mediæval schoolmen it was the method par excellence employed by them in their investigations. For instance, they formulated the judgment whose truth they wished to establish, *in the form of questions,* then proceeded to accumulate as difficulties or objections all the grounds they were aware of, which would seem to render these judgments doubtful or even prove them false; and only after doing this, setting forth the reasons *for* the truth of the judgment in question, and then finally solving the difficulties.

Moreover, it is not for emphasizing the indubitable character of his existence, as revealed in his own think-

ing and doubting, that Descartes deserves reproach; nor was he the first to emphasize the point. St. Augustine had emphasized it centuries previously, and to excellent purpose, against the scepticism of the latter Academicians: " 'Perhaps you are deceived' they say to me. But if I am deceived, I exist. He that does not exist is not deceived; hence, even if I am deceived, I exist." (*De Civitate Dei,* xi, 26.) And St. Thomas drew attention to the indubitable self-revelation of the Ego in the process of thinking. (*De Veritate,* Q. X, art. 12.) Descartes deserves reproach for not emphasizing the *equally indubitable character* of many other judgments.[1]

[1] Rickaby, *First Principles,* pp. 155 and 160; Coffey, *Epistem.*, vol. 1, pp. 103 and 125.

THESIS III

"There Are Three Kinds of Certitude: Metaphysical, Physical and Moral"

From the rejection of universal scepticism, we are *absolutely* sure that there is such a state of intellect as certitude. Now we wish to examine the nature and kinds of certitude, of that spontaneous certitude which was mentioned in Thesis I.

Certitude is "The firm assent to a truth, based on motives that exclude prudent fear of error." The element "prudence" refers to the reasons or motives of assent. Hence, fear of error is excluded by motives which leave no room for reasonable doubt. Our grounds for assent are reasonably sufficient. An imprudent fear of error is a fear that would be unreasonable to entertain.

Mere adherence to truth does not suffice; for in many an opinion we adhere to truth. Certitude further requires that the reasons eliciting the intellect's assent be of sufficient force to exclude the possibility of doubt and fear of error. In other words, the intellect should not only assent without hesitation, but should clearly see that error is incompatible with this firmness of assent.

The certitude which we have defined is called *formal* (genuine) certitude, to distinguish it from a mere firm assent or conviction, and from a state of intellect which, broadly speaking, is equivocally called moral or practical certitude.

N.B.—This moral or practical certitude is not the moral certitude mentioned in our thesis. Practical certitude is, in reality, only "strong probability," *i.e.*, when our motives for assent are so probable, that the contradictory can be neglected. This happens frequently in daily life; hence it has been said that "Probability is the guide of life."

A motive is that which impels one to act. This activity might be of the intellect or the will. Here we speak of the activity or assent of the intellect.

Motives of certitude are reasons which compel the intellect to assent without fear of error. Besides motives of certitude, there are also probable motives, *i.e.*, motives that give rise to opinion.

Formal or *genuine* certitude includes both a firm assent without fear of error, and an objective motive. A firm assent without fear of error is required, otherwise we would have mere "opinion." As is evident, however, such a firm assent is compatible with error; but in this case, the firm assent is not genuine certitude. General experience shows this, for when a person realizes his mistake, he says: "I thought I was certain, but I was mistaken."

Moreover, an objective motive is required. By an "objective motive" we mean something in the objects themselves, or in their surroundings, which compels our assent. And such a motive *excludes all fear of error,* when it shows clearly, in a given case, that the contradictory of that to which we assent is not only improbable, but impossible, *i.e.*, the contradictory cannot be true under the circumstances. The reality thus looked upon as the object of a certain judgment is usually called a "certainty," or an "objective certainty," while

the intellectual state is described as "certitude," or the "state of certitude."

Consequently, formal or genuine certitude implies the unfailing connection between the judgment and the thing judged. For it requires: (1) a firm assent without fear of error (2) to a truth, not merely an apparent truth, but a real, objective truth; (3) to a known truth, *i.e.*, it should be manifested to the intellect, and (4) by motives which exclude the possibility of the contradictory being true at the same time. Hence, we can say that genuine certitude is the perfect state of the intellect, for the intellect rests in the assured possession of truth, and that every genuinely certain judgment is true.

In formal or genuine certitude, the *simultaneous actuality* of the contradictory is impossible or excluded, but not always the *simultaneous possibility* of the contradictory. For instance, if we take the two facts expressed by the propositions "John is studying" and "John is not studying," *either* can now be true, since the matter of the proposition is contingent ("to study" not pertaining to John's essence); but *both cannot be actually* true together under the same respect. When, therefore, I assent to one fact because of motives which manifest its truth, the contradictory being true (actual) at the same time (simultaneously) is impossible or excluded. However, there is still the *possibility* of the contradictory being true instead (simultaneously); in which case, of course, my reasons would be different or wanting.

We said that the simultaneous possibility of the contradictory is *not always* excluded; for sometimes even the possibility of the contradictory is excluded, as when we assent to a necessary truth, *e.g.*, a square has four sides.

Metaphysical certitude is a firm assent to a truth without fear of error, the motive being the application of a metaphysical law, *e.g.,* a circle is round; a whole is greater than any of its parts.

A law, in general, is *a permanent norm or rule of action.* **Metaphysical laws** are *the relations between essences in the abstract.* The essences of things are absolutely unchangeable; hence, the relations between them are absolutely unchangeable.

Physical certitude is a firm assent to a truth without fear of error, the motive being the application of a physical law, *e.g.,* this book will fall to the ground.

Physical laws are *tendencies in bodies from which a constant and uniform mode of action proceeds, e.g.,* fire has a tendency to consume.

The constant and uniform mode of action is not the law, but the effect or execution of the law. However, since the same name is frequently applied to both a cause and its effect, this mode of action can be called the physical law, and is so called by scientists.

Here we presuppose that there are physical laws, that necessary causes have a constant tendency to produce the same effect when the circumstances under which the causes act are the same. Moreover, we presuppose that the *effect* or *execution* of these tendencies can be stayed by the power of God, the Author of nature, though in keeping with His Divine Wisdom, there must be some uniformity in nature.

For the application of a physical law to be a motive of certitude in a given case, we must presuppose that there is a law, and that there is no reason in the given case for suspecting the contradictory of that to which we assent, otherwise we would not rationally give a firm assent. Consequently, there is no suspicion of exception, and there is a motive determining assent. Our reasons for assenting have full sway.

The contradictory is metaphysically or absolutely possible, *i.e.,* an exception does not destroy the essence of the object; but physically, *i.e.,* according to the laws of nature, impossible.

Moral certitude is a firm assent to a truth without fear of error, the motive being the application of a moral law, *e.g.,* Mr. Jones loves his children. An exception is possible through the free will of man.

> **Moral laws** are *tendencies in man's nature to help him to perform certain important operations more readily and securely, e.g.,* parents love their children. Here we presuppose that there are moral laws, and that man has a free will.

For the application of a moral law to be a motive, we must presuppose that there is a law, and that there is no reason in the present case for suspecting the contradictory of that to which we assent. Otherwise, we would not rationally give a firm assent. An exception is not to be presupposed. Here, too, our reasons for assenting have full sway.

The contradictory is metaphysically and physically possible, but morally impossible. In other words, the fulfillment of these laws can be prevented by the physical power of man, and without his ceasing to be a man. Such exceptions, however, suppose a degree of folly or depravity so great as hardly to be in keeping with man's nature, *i.e.,* they are morally impossible.

N.B.—(1) The certitude itself is not metaphysical, physical, or moral. Certitude is denominated metaphysical, physical, or moral, because of the motives for assent. For the same judgment might be metaphysically, or physically, or morally certain according to different motives. Thus, I can assent to the fact: "Mr. Lindbergh visited New York" either because I saw him there (physical certitude), or because a reliable witness told me (moral certitude).

(2) Metaphysical certitude, admitting no exceptions, is higher, and its motives of greater value, than the other kinds of certitude; still, it is not always more appealing. For instance, a child might give a stronger assent to the fact that its mother loves it, than to the fact that a triangle is a plane figure bounded by three straight lines.

(3) Physical and moral motives can at times be found to be wanting, *i.e.,* the law might not be applied in a certain case. When this happens, a person might have a firm assent without fear of error, but there is no genuine or formal certitude; for the assent is not given to a fact or truth.

(4) Physical and moral certitude might be changed to metaphysical certitude, by basing our assent upon a metaphysical principle. For example, *cf.* "N.B.," after the proof of the thesis.

(5) For physical and moral certitude, it is not necessary to exclude all possibility of error, but merely to exclude prudent (reasonable) *fear* of error. Fear, of its very nature, has reference to something proximate and imminent.

(6) The mere absence of a reason for suspecting an exception excludes only the *probability* of the contradictory. In our physical and moral certitude, there is the absence of a reason for suspecting the contradictory, and at the same time there is a physical or moral motive excluding the actuality of the contradictory and demanding a firm assent. The absence of a reason for suspecting an

exception is a requisite condition for the intellect to rest with the physical or moral motive. For as soon as there is a positive reason showing that an exception is probable, the intellect withholds its assent.

(7) When we speak of a physical or moral motive, we do not mean the *tendency* in an object according to which that object acts, *e.g.*, "this stone has a tendency to drop," for a stone essentially has a tendency to fall, and our certitude would be metaphysical; nor do we mean an effect which is *generally* obtained, *e.g.*, "parents in general love their children," for it would be inconsistent with the nature of a law not to produce its effect generally, it would cease to be a law; but we mean *a law, physical or moral, as applied to a particular case;* which law or tendency, however, can be prevented from producing its effect, the former by God, and the latter by the abuse of man's free will.

(8) All physical truths must be inseparably bound up with some metaphysical principles, *e.g.*, the principle of contradiction, and a moral truth must have conjoined with it not only metaphysical but also physical principles, for we judge human conduct through physical activities. These principles, however, are not our motives, but a foundation for our certitude, *i.e.*, we should be absolutely sure that there is a physical or moral motive for our assent.

Proof of the thesis: There are three kinds of certitude, if there are three kinds of motives which give rise

to a firm assent without fear of error. But there are three kinds of motives which give rise to a firm assent without fear of error. Therefore—

Maj.: The motives, inasmuch as they are the cause both of the firm assent and exclusion of fear, *i.e.,* of the infallibility of the act of the intellect or its necessary connection with truth, are the formal element and specify the act of the intellect as certitude. Hence, if the formal element is multiplied, the certitude is multiplied.

Min.: (1) Metaphysical motives (the application of metaphysical laws) give rise to a firm assent without fear of error, because the essences of things are unchangeable.

(2) Physical motives (the application of physical laws) and moral motives (the application of moral laws) give rise to a firm assent without fear of error, because they truly, though hypothetically, exclude the physical and moral simultaneous actuality of the contradictory.

Metaphysical certitude is called *absolute,* because it is based upon motives that are unchangeable, and, consequently, independent of any condition. Physical and moral certitude are called *hypothetical,* because the value of the motive, and, consequently, of the firmness of assent, depends upon the condition that there has been no exception to the physical or moral laws. The terms "absolute" and "hypothetical" refer not to the assent, for the intellect either assents or not; but they refer to the *firmness, i.e.,* the assent is either absolutely or hypothetically firm.

N.B.—When we say that physical and moral certitude are hypothetical or conditional, *we do not*

mean that this certitude is expressed in conditional form, e.g., "If God does not intervene, this stone will fall"; "If Mr. Jones is not acting against his natural tendency, he loves his children." Such conditional propositions are metaphysically (absolutely) certain; for, by the expressed condition, the only source of exception is excluded, and the proposition now embodies the principle of contradiction. What we assent to in physical and moral certitude *are the facts expressed in the consequents, in categorical propositions:* "This stone will fall"; "Mr. Jones loves his children"; which, of themselves, imply a condition, namely, the existence and perseverance of the present physical order of the material universe, and man's acting in accordance with his nature.

Cor. 1: True certitude (considered subjectively, as it exists in the intellect) is the effect of true *objective evidence.* This evidence is simply the manifestation of a truth to the intellect. Hence, certitude can also be defined as "A firm assent based upon evidence."

Cor. 2: For every certitude which is not self-evident, there is a producible analysis of motives. A perfect analysis might not be forthcoming, but at least a sufficient explanation may be offered. If the truth is self-evident, the self-evidence is the motive of belief; otherwise there must be some inferential evidence. At any rate, for a real certitude of the natural order, there must always be producible evidence.[1]

Schol. 1: Certitude admits grades as regards the firmness of assent, but not as regards the exclusion of fear.

[1] Rickaby, *First Principles,* p. 122.

(a) As regards the firmness of assent there are grades, because the firmness of assent varies: (1) according to the motives of assent, and the motives might vary both as to number and to character; (2) according to the clearness with which these motives are manifested; consequently, the motives will have different effects on different intellects, *e.g.*, on the intellects of educated and uneducated men, etc. Hence, not only is metaphysical certitude firmer than physical certitude, and physical certitude firmer than moral; but one metaphysical certitude can be firmer than another metaphysical certitude; one physical certitude can be firmer than another physical certitude, etc.

(b) As regards the exclusion of fear (here we speak of the exclusion as such, not of the foundation for exclusion, *i.e.*, the metaphysical, physical, or moral laws) there are no grades; for exclusion of fear is the negation of fear, and between "fear" and "not-fear" there is no mean. Hence, fear is either excluded or not.

Schol. 2: *Metaphysical certitude* is for the most part about truths in the abstract order, except where the concept of the subject involves in it the concept of existence; for to deny it is to deny in the predicate what is implicitly affirmed in the subject, hence a contradiction. *Physical certitude* involves the immediate data about our sense-experience, and general judgments established by induction about the facts of sense. *Moral certitude* is based upon authority and upon our generalization of the conduct of free agents, and upon the individual facts, phenomena, etc., to which we apply these generalizations.

Schol. 3: Certitude cannot be counted as the result of a number of probabilities. The higher the de-

gree of probability, the nearer we approach to certitude; but no new degree of probability added to preceding degrees can produce certitude, because probability has always attached to it a fear of error. Certitude essentially excludes all prudent fear of error.

Difficulties:

(1) Certitude is impossible. For, since certitude is the perfect state of the intellect, it requires a perfect knowledge of things. But this is impossible. Therefore—

Answer: Certitude is the perfect state of the intellect inasmuch as it rests in regard to the fact here and now considered, *we grant;* inasmuch as it grasps the entire material object, *we deny.* A comprehensive knowledge of the object is not required for certitude. There may be many facts concerning the object of which the intellect is not conversant.

(2) Either you know absolutely that an exception has not taken place, or you do not know. If the former, you have metaphysical certitude; if the latter, you have no certitude at all. Hence, there is only one certitude.

Answer: Evidently the disjunction is not complete. For, either you know absolutely that an exception has not taken place, or you know because of a physical or moral motive, or you do not know, *we grant.* Of necessity you know absolutely, *we subdistinguish:* in order to have metaphysical certitude, *we grant;* in order to have physical or moral certitude, *we deny.*

THESIS IV

"There Are Three Primitive or Fundamental Truths: (1) The First Fact (the existence of the one judging); (2) The First Principle (the principle of contradiction); (3) The First Condition (the aptitude of the intellect to attain truth)"

From the refutation of universal scepticism and universal methodic doubt, it is clear that we must admit certain truths which cannot be demonstrated and need not be demonstrated.

In other words, since every demonstration is ultimately based upon self-evident principles which need no demonstration and cannot be demonstrated, and doubt cannot exist without admitting something as certain, it is evident that the initial attitude of philosophy is not one of universal doubt, either real or methodic, but of careful reflection upon spontaneous certitude. It only remains to examine what and how many are the truths which are not only incapable of being seriously doubted, but from whose certitude the intellect cannot prescind without becoming incapable of any certitude and of any reasonable inquiry.

Primitive truths are those which do not presuppose others, and are affirmed at least implicitly in every certain judgment.

(a) *Do not presuppose others, i.e.,* cannot be reduced to simpler truths of the same class. Each is primitive in its own order.

(b) *Are affirmed at least implicitly;* for each can be explicitly affirmed, *e.g.,* "My intellect is capable of attaining truth." In which case the two other truths are affirmed implicitly.

To have force as *fundamental* truths, these primitive truths should be implicitly apprehended or *known.*

When we say that these truths are implied in every judgment, we refer to the judgment *as an act of the intellect* knowing and affirming an objective truth. For that about which the judgment is made, *e.g.,* "The sun is shining," does not depend upon my existence, nor upon the aptitude of my intellect to attain truth.

Let us take, for example, the certain judgment: "The dog is small," which is equivalently: "My judgment that the dog is small is certain." In this judgment the primitive truths are affirmed implicitly; for when I say: "The dog is small"

(1) I implicitly say: "I know the dog is small"; and by saying: "I know," I implicitly say: "I exist." Therefore the first fact is affirmed.

(2) I implicitly say: "and is not not-small," *i.e.,* I implicitly assert the difference between "small" and "not-small." In other words, I assert that "small" cannot be "not-small" at the same time and under the same respect, *i.e.,* I affirm the principle of contradiction.

(3) I implicitly say: "I know for certain that the dog is small," *i.e.,* I assert that I have a certain cognition, and hence that my intellect is able to attain truth.

N.B.—To avoid confusion, we must mention meanings of primitive or first truth *different* from the meaning taken in our thesis:

(1) A first truth is one which contains all other

truths, so that from an analysis of that truth all others might be deduced. As far as we know, there is no such first truth.

(2) A first truth is one which is first in the order of time.

Proof of the thesis (from an analysis of a certain judgment): Those truths are primitive or fundamental which (1) must necessarily be affirmed, at least implicitly, in every certain judgment; and (2) cannot by any analysis be reduced to a more fundamental truth in the same class. But the three truths enumerated in our thesis are such. Therefore—

Maj.: This is our definition of a primitive or fundamental truth.

Min.: We must prove that these two conditions *taken together* hold as regards the three truths enumerated in our thesis. So we prove the two parts of the minor premise.

(1) From an analysis of a certain judgment, it is evident that the one judging asserts:

(a) that the judgment is his, that he is judging;

(b) that his judgment affirms something which for some reason excludes the simultaneous actuality of the contradictory;

(c) that he knows this for certain.

But this is to assert, at least implicitly, the first fact, the first principle and the first condition. Therefore—

(2) Those truths which, as regards a certain judgment, are fundamental each in its own order, cannot be reduced to more fundamental truths in the same order. But the

truths in the thesis are, as regards a certain judgment, fundamental each in its own order. Therefore—

Maj.: Evident.

Min.: (a) *One's own existence,* because the judgment, viewed *subjectively,* or inasmuch as it is an act of my intellect, is ultimately based upon my existence. My existence is absolutely the first fact which is required for me to form a judgment, nor can it be reduced to a more primitive fact which must necessarily be affirmed in every certain judgment. Of course, my existence can be reduced to the existence of my parents, etc.; but these facts are not necessarily affirmed in every certain judgment. And this affirmation is required for a primitive truth.

(b) *The principle of contradiction,* because a judgment, considered *objectively,* is based upon this principle. For all certitude, even of principles that are immediately evident, arises precisely from the fact that my intellect sees that the thing is so and cannot be otherwise, *i.e.,* arises ultimately from the principle of contradiction.

(c) *The first condition,* because the first truth *linking the subjective*

order and the objective order is the aptitude of the intellect to attain truth, the power of the intellect to know. Take away this power, and actual knowledge is impossible.

Cor.: It is evident that our primitive truths *cannot be demonstrated,* because in every demonstration they would necessarily be presupposed; *nor do they need to be demonstrated,* because the very denial of, or the doubt about, these truths would imply their affirmation. The proof of our thesis is merely an explanation in syllogistic form.

Schol. 1: If we did not have these primitive indemonstrable truths, which both prove themselves by their self-evidence, and form the basis of all demonstration, every demonstration would depend upon an endless series of demonstrations, and no certain conclusion would be possible.

Schol. 2: These primitive truths are implied not only in certain judgments, but also in probable, and even in false judgments.

Difficulties:

(1) There are many truths which do not depend upon the existence of the one judging.
Answer: In the objective order, there are many truths which do not depend upon the existence of the one judging; but there is no truth the *knowledge of which* does not depend upon the existence of the one judging. We do not, however, postulate the existence of the one judging as a source of knowledge, but only as a partial foundation.

(2) The principle of sufficient reason is a primitive truth.

Answer: The principle of sufficient reason ("Nothing can exist without an adequate reason for its existence," *i.e.,* should have that which distinguishes it from non-being) can be considered as another way of expressing the principle of contradiction ("A thing cannot be and not be at the same time and under the same respect"). If, however, it is considered as a principle really distinct from the principle of contradiction, then it is based upon the principle of contradiction. For a thing would be without a sufficient reason, if it could be and not be at the same time and under the same respect. The principle of sufficient reason supposes the difference between being and not-being.

(3) The principle of identity is prior to the principle of contradiction.

Answer: The principle of identity ("What is, is," or "every being is that which it is," or "every being is its own nature") demands that the object of thought, when subjected to intellectual analysis and regarded from *different* points of view and under *different* aspects, be considered and understood to remain objectively identical with itself throughout. But this principle is merely another way of expressing the principle of contradiction. For, viewed *ontologically,* the principle of identity says: "Every being is what it is"; and, viewed *logically,* it says: "We should always affirm what agrees with an object"; while the principle of contradiction, viewed *ontologically,* says: "The same thing cannot be and not be at the same time and under the same respect"; and, viewed *logically,* it says: "The same thing cannot be affirmed and denied of the same subject at the same time and under the same respect."

THESIS V

"The Human Intellect Is of Its Nature Infallible in Its Judgments"

This thesis may be considered as a corollary drawn from Theses I and IV: from Thesis I, *cf.* Thesis I, Cor. 2; from Thesis IV, for the aptitude of the intellect to attain truth implies that the intellect is of its nature infallible, though it can err by accident.

Intellect, *i.e.*, the spiritual cognitive faculty.

Infallible. Restricting this term to knowledge, infallibility means: "Incapability of erring."

A faculty is infallible, if it cannot err.

A faculty is *of its nature* infallible, if acting only in accordance with that nature it cannot err, *i.e.*, of its nature it is ordained to attain truth and is capable of attaining truth.

A faculty is fallible *by accident*, when it can err because of some reason other than its nature.

In its judgments, for we shall see later that error is had only in the judgment.

N.B.—(1) If we consider man *with all his faculties*, he is of his nature fallible; because in man there is a combination of faculties, and in that combination there is found an element which might lead him into error, *e.g.*, the influence of his passions, his will hastening the intellect to judge, etc. Hence, we do not say in our thesis that *man* is of his na-

ture infallible; but we claim this infallibility for the *intellect.*

(2) The intellect acts according to its nature: (1) if it has evidence of the object, *i.e.,* if it sees that the object is so and cannot be otherwise; (2) if, when it has not this evidence, it is not determined by prejudices, etc., to form a judgment, but refrains from judging.

Proof of the thesis: If the human intellect were of its nature fallible, universal scepticism would have to be admitted. But universal scepticism cannot be admitted. Therefore—

Maj.: For a faculty which is of its nature fallible, is of its nature indifferent to truth and error, and hence incapable of perceiving and distinguishing truth. Therefore it is incapable of a *certain* judgment, and thus all certitude is destroyed. In other words, if the intellect were of its nature fallible, we could always doubt whether or not it was leading us into error, for the nature of the intellect is always the same.

Cor.: The natural infallibility of the intellect *does not need to be demonstrated,* for its denial implies its affirmation; *nor can it be demonstrated,* for in every demonstration it would necessarily be presupposed. Consequently, our proof of the thesis is not direct, but indirect.

Schol. 1: Although the human intellect is fallible "by accident," it is not so in everything. As regards truths that are immediately evident, the intellect cannot in any way be led into error, because the condition for error (*i.e.,* ignorance or imperfect knowledge) is absent. Nor is the intellect under the influence of the

will, for when immediate evidence shines in upon the intellect, all indifference ceases, and the intellect of its nature is necessitated to assent.

Schol. 2: We must remember that the intellect is a necessary faculty, *i.e.,* when all the conditions requisite for acting are present, it must act. Still, in the absence of evident truth, which is the proper object of the intellect, it is not of itself necessitated to act. In the case of false judgments, therefore, where the evidence is only seeming or apparent, it must have received its inclination to judge from without, *i.e.,* from the will.

Difficulties:

(1) The intellect is not of its nature infallible, if its nature, being finite, excludes infallibility. But its nature, being finite, excludes infallibility. Therefore—

Answer: The finiteness of our intellect merely demands that our knowledge be limited, not that our intellect be of its nature fallible. But because it is a finite intellect and does not know everything, it can, under the influence of the will, through lack of due reflection, etc,, form false judgments regarding truths that are not evident. In such judgments, the intellect is lured by seeming or apparent evidence. In judgments, however, which the intellect forms by itself, error cannot creep in, for in these judgments the intellect is necessitated by the evidence of the objective truth.

(2) Since the intellect is finite, it is essential to the intellect that it be able to err.

Answer: It is essential to the intellect that it be able to err "by accident," through lack of evidence, etc., *we grant;* that it err of its very nature, *we deny.*

(3) The multitudinous errors and contradictions which have always prevailed in human beliefs show that the human intellect is utterly unreliable.
Answer: The trustworthiness of our intellect is not affected by the fact that many people err, teach error, and use their reasoning power to teach error. Their errors came from a neglect or violation of the rules of reasoning, or possibly from the fact that they suppose to be true something that is doubtful or false. *Cf.* Thesis I, Schol. 2.

THESIS VI

"Ideas Have Objective Value. Hence Idealism Must Be Rejected"

As we remarked in the introduction, Epistemology is the science of knowledge. Now we wish to show that knowledge is really objective; that we know things as *they* are, rather than as *we* are; that knowledge is not an illusion, mistaking for objective realities that which is merely subjective.

In our thesis we speak of ideas or concepts viewed merely according to that which they represent, without regard to the intrinsic nature of the ideas.

By saying that ideas *have objective value*, we mean that ideas have *at least a foundation in reality*, so that they correspond in some way to something real, something distinct from, and independent of, our thought. Thus, the idea of cause, substance, part, whole, etc., have objective value, if cause, etc., are not mere products of the intellect, whose whole reality consists in this that they are thought of; but if, in themselves and independently of the ideas, before and outside of the ideas, they are something. In other words, ideas have objective value, if they *represent* objects and do not create them. Ideas, therefore, are *entitatively* subjective, *representatively* objective, *i.e.*, they exist in the intellect as in a subject, but represent objects.

Thus, an idea can have objective value, because: (1) its object is something *actually* existing in the physical order; or (2) its object is something *possible, i.e.*, something that can exist in the physical order inasmuch as

its notes do not involve a contradiction; or (3) it has a real object corresponding to *what is represented* in the intellect, *e.g.*, I have a direct universal idea "man." Now, there is not a universal man in reality corresponding to my idea, but there is an individual man corresponding to it. The object cannot exist outside the intellect as regards *the way* it is represented, but only as regards *that which* is represented; or (4) the idea has a foundation in reality. This is the case for all "logical beings," *i.e.*, things which can exist as such only in the intellect, *e.g.*, privations, negations, reflex universals, etc. They cannot exist outside the intellect either as regards that which is represented or in the way it is represented. For instance, I have an idea of "darkness." Though not representing a positive quality in reality, it is not a mere product of my intellect. The object corresponding to my idea is independent of my thought: it is the absence of a positive quality called "light."

Hence, when we form a judgment about anything, whether it be a thing in the physical order, or in the metaphysical order, or in the mental order, we do not believe that we are led, and, as it were, forced to pass this judgment because of a necessity which is *subjective, arising from our intellects;* but we think that we apprehend and know that thing in itself as independent of our knowledge, that it is in itself objectively as we know it, and that the necessity by which we are forced to pass such a judgment arises primarily from the fact that the object in itself is so and cannot be otherwise.

We believe, therefore, that an objective or ontological order, independent of our knowledge, is represented by our ideas, to which order our intellect is subject in its knowledge, to which it conforms in its knowledge, and which it truly and faithfully expresses by its ideas.

And, just as we believe that our ideas represent real things, so we judge that the principles drawn from these ideas, *e.g.*, the principle of contradiction, of causality, etc., are not mere logical laws or laws of thought, but are also ontological laws or laws of essences. Nor do we restrict these laws to the order of existence, the physical order; but we extend them to the whole sphere of essences, even of mere possible things.

Thus, against the Idealists we claim that by our ideas there is a transition from the knowing subject to the ontological order. But remember, *we do not claim*—

(1) That there is necessarily an object in the physical order corresponding to every idea;
(2) That the intellect in its judgments cannot err by accident;
(3) That all our ideas represent something which exists or can exist in the ontological order both as regards that which is represented by the intellect, and the manner in which it is represented. For we also know negations, privations, logical relations, etc., which can exist objectively only in the intellect, though they have a foundation in reality.

We assert, then, that the nature of the intellect and its relation to the objective order of things are such, that what we know to exist or not to exist, to have such a reality or not to have such a reality, is so and not otherwise in the ontological order, unless the intellect errs by accident.

Idealism, in Epistemology, is the doctrine which denies that knowledge can attain to anything beyond the modifications of the conscious Ego. These subjective modifications or representations, whether sensuous or intellectual, are called "ideas."[1]

[1] For the Principles of Idealism, *cf.* Dubray, *Intro. Phil.*, p. 387.

Absolute Idealism denies the existence of any kind of reality outside the knowing subject. Thus, Fichte, Schelling, Hegel, etc.

Phenomenism or **Phenomenal Idealism,** while admitting the real existence of things, holds that we do not know the things as they are in themselves, but only phenomena (subjective appearances). Thus, Kant, etc.

Acosmic Idealism denies objective value to our ideas of sensible things. Such ideas are immediately produced in us by God. Thus, Berkeley, etc.

N.B.—(1) This doctrine of Idealism is based upon the "Principle of Immanence," or the denial that knowledge can transcend to anything beyond the knowing subject. For this reason, Idealism is also called "Immanentism" or the "Doctrine of Immanence." It is likewise called "Subjectivism," because it teaches that we do not know realities as existing independently of our knowledge, but only as the subject forms the objective order of things by its representations. If the subject is the total cause of its representations, Subjectivism is identified with Absolute Idealism; if the subject is only a partial cause of its representations, Subjectivism is identified with Phenomenism or Phenomenalism.

(2) In this thesis we speak about the objective value of ideas in general. Acosmic Idealism will receive special attention in the theses on "Sensation."

Our thesis cannot be demonstrated, nor does it need demonstration; for it is presupposed in every demon-

stration, and to doubt or deny the objective value of ideas is to affirm it.

(a) **It is presupposed in every demonstration**; for no premises can be framed which do not assume the conclusion, and unless we suppose the objective value of ideas, we cannot draw a conclusion.

(b) **To doubt or deny the objective value of ideas is to affirm it**; for one who doubts or denies this fact implicitly admits that his judgment is true, *i.e.*, conformed to the object, and that his ideas represent the object about which the judgment is made. Such a man would have an idea of an idea, *i.e.*, would have an idea which represents an object. Moreover, anyone who denies the objective value of ideas affirms, thereby, that he knows something, namely, either ideas in general, or past ideas. But these are independent of and distinct from the present act of knowledge. Therefore one who doubts or denies the objective value of ideas implicitly affirms it.

Since, then, the objective value of ideas cannot be demonstrated, we can only point out the agreement of our thesis with the dictates of right reason. The second part of the thesis logically follows from the first part.

Proof of the first part of the thesis: If ideas had no objective value, universal scepticism would have to be admitted. But universal scepticism cannot be admitted. Therefore—

Maj.: One who doubts or denies the objective value of ideas should doubt or deny the principle of contradiction. If there is no objective value to ideas, the principle of contradiction falls, and when I say: "A thing cannot be and not be at

the same time and under the same respect," I would be merely uttering words. Moreover, we could never form a judgment, or reason about anything, because judgments and reasoning are based upon the principle of contradiction.

To doubt or deny the objective value of ideas is to suppose that objects correspond to at least the ideas of being, existence, truth, affirmation and negation. Any other supposition would render assertion, doubt and denial equally impossible, and would reduce speech to empty, meaningless sound. Nay, unless the idea of existence has objective value, we cannot know for certain whether we are alive or dead.

Consequently, were our thesis untenable, universal scepticism would be the only plausible theory.

Cor.: *Idealists* imagine that what we first of all know are subjective affections as such, and then, of course, they see no way to a proof that these subjective affections are like objects without. Consequently, Idealists hold that knowledge is only an immanent action.

Realism, on the other hand, holds that the intellect does not know only its own ideas. It does not even know them primarily, but only through reflection. The idea has not first to be known; nor does the intellect look at the idea first, and then go on to infer objects. Realism holds that the idea is itself constitutive of the act of knowledge, *i.e.,* having the ideas, we have knowledge. Thus, ideas are not objective signs, but *formal signs;* not means through which we know objects, but *means by which* we know objects. If ideas were merely objective signs, we could never pass beyond the subjective order, for the objects of our knowledge would always be mere thought. Hence, according to the Real-

ists, knowledge is an entitatively (physically) immanent, but representatively transient, activity, *i.e.*, our thoughts are something subjective, but with an essential reference to some object.

Schol. 1: An idea is an intentional likeness of the object it represents, *i.e.*, a likeness in representation, a cognitive likeness; for when we think of house, tree, man, etc., these objects do not exist in our intellects according to their physical likeness. Hence, the principle: "Knowledge exists in the knowing subject according to the nature of the knowing subject."

Our ideas, as we said, are entitatively subjective, and representatively (cognitively) objective. However, the representative or meaning power of an idea is not photographic, nor anything analogous to photography. The idea depicts its object in no way open to our artists neither by similarity of substance, nor of color, nor of outline, nor by any mode of material portraiture. The process is so peculiarly mental or spiritual, that illustrations borrowed from matter are more calculated to mislead than to direct. The uniqueness of the phenomenon is essentially its strangeness, for we cannot explain it by reduction to any familiar class.[1]

Schol. 2: The objective value of ideas is the foundation of the aptitude of the intellect for attaining truth. Hence, one who denies the objective value of ideas should deny the aptitude of the intellect to attain truth; for this aptitude is evidently the same as the aptitude to acquire ideas which are in agreement with their objects.

Schol. 3: In the act by which I elicit a judgment—
(a) I explicitly affirm the identity or diversity of two objects;

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[1] Rickaby, *First Principles*, p. 6.

(b) I implicitly affirm the identity or diversity of two ideas;
(c) I implicitly affirm the agreement of two ideas with their respective objects.

Difficulties:

(1) Ideas are representations. But representations can be false. Therefore—
Answer: We grant the major and distinguish the minor: can be negatively false, *we grant;* can be positively false, *we deny.*

Negative difformity or disagreement is had when my idea does not represent all the notes of an object. This is not real falsity, but an incomplete idea. For real falsity, we must have positive difformity or disagreement. We shall see later that ideas cannot be false.

(2) Our thesis involves us in a vicious circle (*petitio principii*). For, to know that our ideas represent objects, we should have some means of comparing ideas with objects in order to see whether or not our ideas are conformed to these objects, and the only means we have is another idea.
Answer: We deny the assertion and distinguish the reason offered: if ideas are objective signs, *we grant;* if ideas are formal signs, *we deny.*

Of course by a new and separate act, by reflection, the intellect can come to know the conformity of a previous idea with its object; but the nature of ideas is to represent objects, and the ideas exist and are distinguished one from another only in so far as they are representations, *means by which* the intellect *immediately* knows objects. Hence, as we said before, ideas are *formal* signs, not objective signs.

(3) An idea is unable to exist separated from the intellect. But a known entity is an idea. Hence, a known entity is unable to exist separated from the intellect.

Answer: We distinguish the minor: an entity viewed as known, *we grant;* an entity which is known, *we deny,* except in the case of reflection on an idea.

Universal Ideas

This is only an application of the principles in our thesis, but we introduce the question about the universals for a twofold reason: (1) all sciences treat of universal propositions and conclusions; and, consequently, the question about the objective value of universal ideas is of the greatest importance; (2) a special difficulty arises: "How can universal ideas have objective value, if objects are singular?"

Different Views About the Universals:

Nominalism holds that there is no universality either of concept or of objective reality, *i.e.,* that not only is the universal as such not a reality, but it is not even an idea. A universal is a mere term, a *mere name.* The universal serves as a label for numerous more or less similar individuals.

This was the doctrine of John Roscelin (middle of the eleventh century); but all the Materialists and Sensists of the eighteenth century upheld this doctrine. It is based upon an erroneous view of the nature of the human intellect; the view, namely, that man has no other faculties of knowledge than external and internal sense-faculties, that reason or intellect is a sense-faculty

which acts through a bodily organ, and that all our knowledge is reducible to sensations.

Refutation of Nominalism: Terms have no meaning except inasmuch as they are signs of ideas and of things. Hence, universal terms express ideas which are singular, or particular, or collective, or transcendental, or universal. For, when universal terms are uttered, we not only hear the spoken word, but understand, or at least try to understand, the *idea* of the person speaking. Moreover, most nouns in any language are common (universal) nouns, and unless these common nouns expressed ideas, almost the entire language would be devoid of ideas, which is absurd.

Now universal terms do not express:

(1) **Singular** ideas, because a singular idea is applied to only one individual, whereas universal terms are applied to many.

(2) **Collective** ideas, for a collective idea is applied to many taken as a group, whereas a universal term is applied also to each of the group.

(3) **Transcendental** ideas, for transcendental ideas are predicated analogously, whereas universal terms are predicated univocally.

If universal terms express **particular** ideas, our argument is true, for particular ideas are merely universal ideas restricted in their extension.

Therefore universal terms express universal ideas.

Conceptualism agrees with Nominalism in denying the existence of any form of universality outside the intellect; but, on the other hand, teaches that the intellect has the power to construct truly universal concepts. According to the Conceptualists, however, universals are *mere concepts* of the intellect, mere intellectual fictions to which no objective reality corresponds.

Their doctrine is that we observe in a number of objects certain qualities in which they *resemble* each other, and these similar qualities we consider the same, not because they correspond to a nature perfectly alike in all the individuals, nor because our intellect has the power to discern the nature common to all of them, but because they determine in us impressions which we cannot distinguish. The qualities are *similar,* but not the *same.* This oneness is the *creation* of our faculties, not the necessary aspect under which our faculties regard the perfect objective likeness which exists in all the individuals. There is no true unity in existing beings, and therefore no universality based upon this unity. Thus, Durandus (-1332); William of Ockam (1280-1349). Kant's doctrine also is conceptualistic.

Refutation of Conceptualism: Universal ideas represent something objective which can be predicated univocally of many individuals, as granted by the Conceptualists themselves. But that which is thus predicated of many individuals is not a name, nor the idea itself, nor the reality of an individual, nor a collection of individuals. Therefore that which is predicated is something real which is found in some way in each individual, *i.e.,* universal ideas have objective value.

Min.: If one says: "Socrates is a 'man,'" the speaker does not mean that Socrates is this *name* "man"; nor that Socrates is the *idea* "man"; nor that he is the *reality of the individual* expressed by the term "man," for this reality is different in each individual and is expressed by the proper name of each one; nor does he mean a *collection of individuals,* for the collection is not each individual.

Exaggerated Realism holds that there is an actually existing universal object corresponding to the universal idea. Thus, for instance, besides the individual "man," which is the object of the singular idea, there is a universal something, a humanity-in-general existing as one object, represented by the universal idea "man." Thus some Platonists, William of Champeaux (1070-1121), etc.

Refutation of Exaggerated Realism: If universal natures existed apart from individuals, they would at the same time and under the same respect be identified with individuals and yet distinct from individuals. But this is absurd. Therefore—

Maj.: They would be distinct from individuals, because they exist apart.

They would be identified with individuals, because they are predicated of individuals by real identity, *e.g.,* when I say: "John is a man."

Moreover, if one says: "John is a man," the force of the predication is that whatever is contained in the predicate as belonging to a whole according to comprehension, that also belongs to the subject. If, therefore, "man" of itself is universal, John also is universal, because whatever really of itself pertains to the nature, pertains also to the individuals possessing that nature. If, therefore, the nature of John is universal, John himself is and should be called universal. But this is evidently absurd. Therefore a universal in reality is absurd.

Moderate Realism (the true view) holds that the universal exists formally in the intellect, but with a foundation in reality. It teaches: (1) that whatever really exists is really an *individual* thing, definite and

determined by characters of place, time, etc.; that it is itself and no other; that it is *not common* to others and cannot be attributed to others; (2) that it is only by being intellectually conceived in the abstract, *i.e.,* by neglecting the characters of time, place, etc., that a thing is stripped of its individuality, loses its incommunicability and can be predicated of many; (3) that there is a real objective foundation for this universal idea, in the perfectly similar natures of the members of the class.

Universal ideas are, therefore, objectively real as regards *that which* they represent, but not as regards the abstract mode of representation, which, however, is not predicated of objects.

In other words, the *matter* of the universal idea is *that which* is represented by it; the *form* is the *manner* in which the matter is represented. The matter is obtained from the definite, determined, individual objects; but the form, or the universality itself, is effected by the intellect; the **direct** universal is formed by abstraction; the **reflex** universal by comparative ontological reflection in addition to abstraction.

(1) **Abstraction,** for the intellect prescinds from, omits, withdraws its attention from, the individuating notes of time, place, etc., which make the object this definite object. Two things are especially necessary for a universal: (1) that that which is universal should be in some way one; (2) that this one should be able to be really multiplied in many. But these two elements, namely, *unity* and *communicability* are not applicable to things before the intellectual operation, and yet are applicable to things when subjected to the intellectual process of abstraction, though not without a foundation in reality.

The result of this first operation is the **direct** universal, which *is capable* of being predicated of a class and of each of the class in the very same sense. It is divided according to the ten categories.

(2) **Ontological reflection**; for, in order to see that the prescinded note (or notes) can be common to different individuals, the intellect must turn upon the direct universal *as representing objects*.

(3) **Comparison.** Of course, as we said, the abstracted note (or notes) is, as a matter of fact, formally universal, but the universality as such is *not known*. The intellect has not yet recognized the reference, the relation, which that note says, as a thing that can exist in many and be predicated of them. That reference is recognized when the intellect, after reflecting, compares the abstracted note with individuals in which it exists or can exist, and sees that note as *something implying a relation to many individuals*.

This knowledge may be obtained by comparing that abstracted note with other direct universals of similar objects, or by inferring that the note represented by a single direct universal can be applied to many.

The result of the second and third operations is the **reflex** universal. It is divided into the five predicables.

Difficulties:

(1) What exists is singular. But ideas exist. Therefore ideas are singular.

Answer: Whatever exists or can exist is singular as regards its entity, *i.e.,* is entitatively one, *we grant;* is necessarily so as regards its power of representation, *i.e.,* representatively, *we deny*. A uni-

versal idea is one singular act of the intellect, but representatively it is multiple.

(2) The universal is said to be one in many. But such is absurd.
Answer: It is one in the intellect and many in reality, *we grant;* one and many in reality, *we deny.* Hence, the universal is one and many under different aspects.

(3) A singular object, of its very nature, cannot be the foundation of a universal idea, and universals do not exist in the real order. Therefore we have no universal ideas.
Answer: A singular object, *inasmuch* as it is singular, cannot be the foundation of a universal idea, *we grant;* an object *which* is singular cannot be the foundation of a universal idea, *we deny.* Singular objects do not become universals outside the intellect.

(4) Science has an object which really exists. But the object of science is the universal. Therefore—
Answer: An object which exists as regards that which is conceived, *we grant;* as regards the manner in which it is conceived, *we deny.*

(5) The intellect presupposes its object. But the object of the intellect is the universal. Therefore—
Answer: Although the intellect, as a representative faculty, presupposes its object, it suffices if *that which* is represented by the intellect pre-exists. It is not always necessary for an object to pre-exist in the manner in which it is represented by the intellect. The intellect does not create that which I know, but it creates the manner in which I know it.

(6) One and the same nature existed in many individuals before any operation of the intellect. But this is a universal nature. Therefore—

Answer: One and the same nature with real unity, *we deny;* with logical unity, *we subdistinguish:* the foundation of logical unity existed, *we grant;* actual logical unity existed, *we deny.*

Before the intellect prescinds from the individuating notes of, *e.g.,* James and John, the natures of James and John do not differ; not that they are really one and the same, but they are similar. Moreover, the entire note, *e.g.,* "human nature," as regards its comprehension, is contained in one man, but not as regards its extension.

(7) The universal can be predicated of many. But what can be predicated of many really exists in many. Therefore the universal is really in many. *Answer:* Can be predicated according to what is conceived, *we grant;* according to the manner in which it is conceived, *we deny.*

The reflex universal is *not* predicated of individuals; and the direct universal is predicated of individuals only as regards *that which* is represented by the universal.

THESIS VII

"Logical Truth Exists Imperfectly in the Simple Apprehension; Perfectly in the Judgment"

It is not our purpose in this thesis to prove the existence of truth, nor that we can attain truth. This has already been proved in the thesis on certitude; for certitude is "the assured possession of truth." The question now is: to what act of the intellect does the complete grasp of truth belong?

"True" and "Truth" are terms ordinarily used in reference: (1) to *objects, e.g.,* that person is a true friend; (2) to *speech, e.g.,* his words are true, he is telling the truth; (3) to *knowledge, e.g.,* his judgments are true.

Now there must be something common to all these which makes them "true." This common element is "The conformity or agreement between thought and object": objects are true, when they agree with the idea or definition we have of them; words are true, when they are in agreement with the speaker's thoughts; knowledge is true, when in agreement with the objects thought about.

(1) In the first case above, we have *ontological* truth (objective truth, real truth, truth of things), which is "The conformity of the object with thought." This will be dealt with in Ontology.

(2) In the second case, we have *moral* truth (truth of speech, "truthfulness," "veracity"), which is "The conformity of speech with thought." This will be considered in Ethics.

(3) In the third case, we have *logical* truth (truth of thought), which is "The conformity of thought with the object." This is considered in Epistemology.

N.B.—By "conformity" is meant "agreement" or "similarity" or "correspondence."

By "thought" is meant intellectual knowledge, *i.e.*, idea or judgment.

By "object" is meant anything whatsoever: any fact, event, or abstract principle; an actually existing thing, or a mere possible; any thought, even, that is considered by another thought.

We say "with the object"; for in each conformity above there is a norm or standard or measure by which the other is measured. In ontological truth, the thought is the norm to which the object should be conformed. In moral truth, the thought of the speaker is the norm to which his speech or words should conform. In logical truth, the object is the norm to which the thought should conform.

From the rejection of universal scepticism, it is evident that the human intellect can and does know objects distinct from the knowledge itself. Nay, more, it knows with certitude. Now the intellect knows inasmuch as, in some way, it *has in itself* the object known; for if the object is in *nowise* in the intellect, there is ignorance. But objects do not enter the intellect according to their physical entity or nature, for houses, trees, etc., when known by the intellect, are outside the intellect according to their physical entity. Hence, the objects known are in the intellect only in this sense, that there is in the knowing intellect a representation or vicarious likeness of the object known, *i.e.*, knowledge is the rep-

resentation of the object known expressed in the knowing intellect. But in so far as the intellect has this representation, it is *intentionally* conformed to the object. Hence, knowledge is "The intentional conformity of the intellect with its formal object."

Knowledge is said to be a sort of "equation" between thought and its formal object. This equation is a similitudinal equation, *i.e.*, a *correspondence* of the representation in the intellect with the *formal* object of thought. This does not require an exhaustive representation of the object, a comprehensive knowledge of the object. We cannot obtain a comprehensive knowledge of the material object of thought. *Cf.* Thesis VI, Schol. 2.

> "A caricature of our theory frequently set up by its opponents maintains that *correspondence* must mean *copying*, and that the thought which thus 'copies' reality is a sort of photograph of the original; that we have pictures of things in our heads, and that if the pictures are good pictures we have truth.
>
> "Now the upholder of the correspondence theory will agree with his critics that the copy theory as thus described would deserve all the uncomplimentary epithets they are so able in devising for it . . . The real commonsense theory, as I understand it, may then be stated as follows: 'Truth,' or the relation of 'correspondence,' means, not copying, but merely this simple thing, that *the object of which one is thinking is as one thinks it.* Or, to put the same thing in other words, the truth or trueness of an idea is its *conformity to fact.*"[1]

Our definition of logical truth ("The conformity of thought with its formal object") appears from the common agreement of men. This agreement is manifested in two ways:

(1) Our definition is the definition which, after careful examination, has been defended by the philosophers of the highest repute from Aristotle to our own time, and never refuted by a solid argument. On

[1] Pratt, *What Is Pragmatism*, p. 66.

the contrary, those who refuse our definition evidently do so because of their own false doctrine about the nature of knowledge.

(2) From the common way of speaking. For all men, except, *e.g.,* the Idealists and Pragmatists, call a judgment *true,* because it affirms of an object what the object really possesses, or denies what an object really does not possess; and they call a judgment *false,* because it affirms of an object something that the object really does not possess, or denies what an object really does possess. But this is the same as saying that logical truth is the conformity of knowledge with its formal object, or the intentional conformity of the thought with its formal object.

Moreover, our definition of logical truth is affirmed even by those who doubt or deny it. For, whoever doubts or denies our definition, necessarily asserts, thereby, that he understands our definition, *i.e.,* asserts that his intellect conforms to our definition. He necessarily asserts that his intellect conforms to this proposition: "Logical truth is not the agreement of the intellect with its formal object," and that his judgment is true precisely because it agrees with that proposition; otherwise, what, how, or why would he deny, doubt, or assert? But this is to affirm that knowledge is the intentional conformity of the intellect with its formal object, and that knowledge is really the same as logical truth.

Simple apprehension (idea, concept, notion) is the act by which the intellect lays hold of an object without affirming or denying anything about it. This act of the intellect is called "idea," inasmuch as it is an intellectual representation of something.

Judgment is the act whereby the intellect combines or separates two objective ideas by affirmation or negation; or, the act by which the intellect perceives the identity or diversity of two objective ideas.

N.B.—There is no mention here of the third act of the intellect, "reasoning"; for the difference between an immediate and a mediate judgment, which difference consists in reasoning being a *process,* does not affect the present inquiry. We include in our thesis the truth of the three judgments involved in reasoning; but the process itself is spoken of as "valid" or "invalid," not as "true" or "false."

Imperfectly. Imperfect (incomplete) logical truth consists in the mere conformity of the thought (idea) with the object, and excludes all cognizance by the intellect of this conformity. In other words, when a simple apprehension is elicited, the intellect is not in conformity with its formal object *to the extent of its powers nor to the extent demanded by its nature.* There is, of course, the necessary intentional conformity with its object, as we shall see in the proof (otherwise there is no logical truth); and yet, in that intentional conformity, in that initial knowledge, the intellect does not rest, but is impelled by nature to form a judgment.

Perfectly. Perfect (complete) logical truth consists in the same conformity of the idea with the object as is had in the simple apprehension; but includes, in addition, either the explicit or implicit recognition of this conformity *in the same act,* by the intellect. Hence, logical truth is more perfect in the judgment *as regards the state demanded by the intellect.*

This recognition of logical truth need not be explicit.

The recognition is *explicit* when the attention of the knower is manifestly directed to the logical truth, as when, after reflection, one not only says: "The house is white," but: "My knowledge that the house is white is true"; or, "I know and consider the truth of this knowledge which I have."

The recognition is *implicit* when the attention of the knower is explicitly directed to some object, but in such a way that in the very exercise of that act, the agreement of the thought with the object, or logical truth, is at the same time recognized, just as one can say: "The house is white," and at the same time say implicitly: "I know that this knowledge of the object is in agreement with the object itself."

Consequently, though in a judgment we explicitly assert a fact, *e.g.,* "The house is white"; yet, at least implicitly or indirectly, in every judgment, there is contained an "I know," or "as I perceive."

Proof of the thesis: Logical truth is perfect when there is conformity of the thought with the object, and this conformity is recognized in the same act. But this recognition exists in the judgment and not in the simple apprehension. Therefore—

Maj.: For, when this recognition is had, the capacity of the intellect to attain truth with regard to a particular thing is satisfied. This is evidenced by the fact that the intellect rests there. And when there is repose of a faculty which necessarily tends towards a certain object (in this case "truth"), then the object is possessed perfectly according to the capacity of that faculty.

Min.: In the simple apprehension, the ideas are representations of objects and, consequently, conformed to them; but the intellect does not affirm

or deny anything about the object; it does not see that the object is as it knows it.

As often as a man enunciates a judgment, he thereby intends to affirm that his knowledge is in agreement with the object. When he judges: "The house is white," he surely makes this affirmation because he sees that it should be made, *i.e.,* because he sees that his knowledge is true, in which he knows that the house is white. But if he intends this, he necessarily admits that he perceives his knowledge to be in agreement with the object. For, to say: "What I affirm is true," is merely to say: "I recognize the agreement of my thought with the object." Therefore, from the fact that the intellect affirms anything of a subject, it also recognizes the logical truth, *i.e.,* the agreement of its knowledge with the object.

Cor.: In the act by which I elicit a judgment, I (1) explicitly unite or separate two objects by affirmation or negation; (2) implicitly unite or separate two ideas by affirmation or negation; (3) implicitly affirm the conformity of the two ideas with their respective objects; (4) implicitly affirm the conformity of the intellectual affirmation (or negation) with the objective identity (or separation).

Schol. 1: Terms and propositions, the expressions of ideas and judgments, are true *analogically, i.e.,* they are true inasmuch as they are signs which manifest logical truth, just as "health" is attributed to the countenance of a person.

Schol. 2: We sometimes speak of statements we hear as "more or less true," as "containing a certain amount of truth." By this we mean that such statements are ambiguous, and express or imply not one

simple judgment, but many; and that while some of these are true, some also are false.

Difficulties:

(1) The intellect does not rest after eliciting a judgment. Therefore truth does not exist perfectly in the judgment.

Answer: In eliciting a true judgment, the intellect rests as regards the truth attained in the judgment, not as regards every possible truth. The repose of the intellect in a judgment is not *absolute* so long as there are other truths to be grasped. Still, there is perfect repose, though *relative* to the knowledge here and now grasped.

(2) Conformity consists in this, that one thing is like another. But ideas are not like objects. Therefore—

Answer: Entitative or physical conformity consists in this, that one object is like another, and intentional conformity consists in this, that one thing represents another as it is, *we grant;* every conformity consists in this, that one thing is like another, *we deny.* The conformity of the ideas and judgments with their formal objects is *intentional,* not entitative or physical.

(3) If logical truth existed in the simple apprehension, falsity could exist in the simple apprehension. But falsity cannot exist in the simple apprehension. Therefore—

Answer: We deny the major. From the fact that logical truth can exist in the simple apprehension, it does not follow that falsity can be there; for an object which is capable of receiving one quality is not necessarily capable of receiving the contradic-

tory quality. Thus, we can say that a circle is round, but not that a circle is square.

(4) Truth is not present in negative judgments, for in these the conformity is denied.
Answer: We deny the assertion. *Cf.* the corollary above.

A few false opinions regarding logical truth:

(1) Truth is the agreement of thoughts among themselves.
(2) That is true which agrees with the laws of thought. (Wundt, *Sinnliche und Ubersinnliche,* 269.)
(3) Truth is the subjective necessity of thinking as we do. (Richter, *Der Skeptizismus in der Philosophie,* p. 153.)
(4) Truth is the conformity of thought with the state and subjective evolution of the knower. (Krug, *Logik,* No. 2.)
(5) All truths must be verified to be properly true. (Schiller, *Studies in Humanism,* p. 8.)
(6) Truth happens to an idea. It becomes true, is made true by events. Its verity *is* in fact an event, a process; the process, namely, of its verifying itself, its veri-*fication.* (James, *Pragmatism,* p. 201.)

THESIS VIII

"Relativity of Truth as Regards Its Formal Object Is Absurd"

"*Truth*" is here understood as any single proposition or set of propositions concerning any class of things, in so far as these propositions are in agreement with the things. And we ask whether truth of this kind is absolute or relative.

Truth is *absolute,* if, while the subject and predicate remain the same, the nexus between them is so fixed that it does not depend upon circumstances of persons, place, or time.

Truth is *relative,* if the nexus is changeable according to circumstances of persons, place, or time.

Truth would be *relative as regards its formal object,* if the judgment could be evidently true to the intellect at the present time, and later on false; or, if it could be evidently true to one intellect, and false to another.

In our thesis, we say "as regards its formal object," for truth can be relative in many senses. *Cf.* Scholion I.

There is a certain phase of Relativism which is at variance with our conception of truth, the phase, namely, that the human intellect cannot know anything that is fixed or absolute.

Some Relativists claim that thought is not the intellectual reproduction of existing reality; but that intellectual knowledge is *relative* in the sense that it can attain only to subjectively wrought mental appearances

of reality (phenomena), because reality has been transformed by the subjective factor in the process of conception. This form of Relativism is propounded by Comte, Taine, Spencer, Mill, etc.

Later Relativists apply the theory of evolution to the intellect, to all its knowledge and to all its objects, to all truths whether scientific, philosophical, ethical, or religious. Hence, truth is not fixed and unchangeable, but is constantly evolving. What is true for one age or race can be false for another age or race. That is true which is conformed to the state and evolution of the age or race. Relativists, then, will maintain that the truth of the proposition: "Two plus two make four" is not determined by any fixed or absolute objective relation between "two plus two" and "four," but that this relation is determined wholly by the present structure of the intellect, which, in the course of its evolution, may be so altered and transformed, that it may be compelled to think that "two plus two make five." Thus, Paulsen, du Priel, Lass, etc.[1]

Proof of the thesis: Arg. I. A system whose fundamental principle is self-contradictory is absurd. But Relativism is a system whose fundamental principle is self-contradictory. Therefore—

Min.: The fundamental principle, namely, that "truth as regards its formal object is relative," is either absolutely true or false; for the principle is advanced by its advocates as *true,* as the true explanation of what knowledge or the truth of knowledge consists in.

If it is *absolutely* true, the contradiction is apparent, because this principle, at least, can never become false. For, whatever "knowledge"

[1] Coffey, *Epistem.*, vol. 2, pp. 208 and 232.

really and truly is, that it is and that it must be. If the principle is *false*, the entire system falls, and the alternative, that truth is absolute and unchangeable, should be accepted.

Arg. II. From a preceding thesis, the primitive truths cannot be denied; they are always and everywhere true. Hence, some truths cannot become false, but are absolutely true. Moreover, there are many truths which cannot be denied without at the same time denying the principle of contradiction. Therefore these truths also are absolutely true.

Arg. III. Relativism is founded upon a false supposition, the supposition, namely, that man is the measure of truth. For we have seen that we have knowledge of things which are outside our knowledge of them, and logical truth is precisely the conformity of our intellect with the object known. Therefore the objects, and not man, are the measure of truth. Now, since the object about which a judgment is made cannot be such and not such, itself and not itself, at the same time and under the same respect, the judgment in agreement with the object is always in agreement and true; while the judgment that is not in agreement is always such and false.

Cor. 1: Hence, knowledge attains to what reality is *absolutely, i.e.,* not merely to how reality appears to *our* intellects or to how it is *relatively* to the actual constitution of our intellects, but to what it is in itself, and what it must therefore be for *all* intellects.

Cor. 2: Relativism, therefore, destroys all certitude and leads to universal scepticism; for it denies the absolute value of any principles, even metaphysical principles. Hence, no certitude, for all certitude, meta-

physical, physical and moral, is based upon metaphysical principles or laws. (*Cf.* Thesis III, N.B. 8.) Consequently, Relativism is destructive of all science.

Cor. 3: Every system of knowledge must start with the assumption (implied or expressed) that something is really "knowable," that something is "absolutely true," otherwise the system is self-destructive.[1]

Schol. 1: Although we have rejected the principle that truth can be relative as regards its formal object, still, truth can, in many ways, be said to be relative:

(a) The agreement of the intellect with objects can be increased in the sense that it can grasp more notes of the object.

(b) Some truths necessarily contain the element of relativity; thus, one who is learned, when compared with ignorant people, becomes less learned when compared with specialists or men more learned than himself.

(c) A truth, while absolute, might be relative by reason of its practical influence, which varies for different times, etc.

Knowledge must be distinguished from its effects on men's intellects, and on their character and conduct. Different truths have different values; and the same truth has varying values for different types of intellect. A truth which may have a profound influence on human progress at one epoch or in one part of the world may not be appreciated at another epoch or by another section of the human race. All depends on the *preparedness* of men's intellects for its reception, on the mentality of the epoch or section of humanity in question. This implies, however, not that truth or knowledge is relative, not that one and the same judgment is

[1] Mivart, *Lessons from Nature*, p. 6.

true for some and not true for others, or true at one time and not at another, but only that the *practical effects* of a certain item or body of knowledge, or insight into reality, on men's intellects and lives, on their manners and customs, on their actions and institutions, vary from age to age and from clime to clime, according to the measure in which, from whatsoever causes, men are able or unable to appropriate the truth or knowledge in question, to utilize it and act according to it.

(d) A generally received view as to the nature of things in some domain of human experience may disappear and give place to a view which seems a wider, a fuller, deeper, more adequate representation of the nature of the facts. But this by no means implies that the former view was true and has now ceased to be so. Perhaps the former, though true, was not adequate. Or it may be that the former, though helpful in many ways, is now discovered to have been false all the time. Or it may be that the new view, perhaps after proving very useful as a working hypothesis for a time, may afterwards be proved to have been false and may lead to the reinstatement of the old discarded view, or some modification of it, as embodying after all a more accurate apprehension of the facts. In physical science, we have examples of such changes of view.[1]

(e) Knowledge which is true might become false when the formal object or view-point is changed. For instance, "Henry is running" is true while Henry is running; but becomes a false proposition when Henry stops running, unless the time of the verb is changed.

[1] Coffey, *Epistem.*, vol. 2, p. 232.

Schol. 2: A certain kind of evolution or development in knowledge must be admitted, namely, an *accidental* evolution or development. Human knowledge is obviously capable of increase, growth, development, both in depth and extent. This is true both of the individual and of the race. Moreover, new implications of truths or principles already known are being incessantly brought to light. Language changes: languages progress and decay. New discoveries necessitate the invention of new technical terms. The conception of new hypotheses in any domain of human experience similarly involves the finding of new forms of expression.

But granting all this, the intellect remains *essentially* the same as regards the laws of thought by which it is directed; first principles are always the same, the method of reasoning is the same. The study of languages likewise shows that the essential elements are the same in all languages, and that the human intellect has been essentially always the same. Moreover, the mere change in the modes of formulating knowledge in language does not involve change in the knowledge, and certainly not such change—from true to false, or vice versa—as the relativist theory contemplates.[1]

Schol. 3: What we maintain to be the true expression of the "Relativity of Knowledge" holds: (a) that we can only know as much as our faculties, limited in number and range, can reveal to us; (b) that these faculties can inform us of objects only so far, and according as the latter manifest themselves; (c) that accordingly (1) there may remain always an indefinite number of qualities which we do not know, and (2) what is known must be set in relation to the intellect, and can only be known in such relation.[2]

[1] Ibid., p. 235.
[2] Maher, *Psych.*, p. 158.

So much relativity is necessarily involved in the very nature of knowledge, but it in no way destroys the worth of that knowledge.

Schol. 4: It is evident that some philosophers have taken the terms "truth" and "knowledge," and used them in a new meaning, to designate some of the concomitant or subsequent relations between the knowing subject and his environment, rather than the relation of conformity between the intellect judging or interpreting reality and the reality so interpreted. They thus confuse the issues of Epistemology by fostering misconceptions.

Difficulties:

(1) The whole world of our direct cognitive experience is subject to change, because its reality consists not exclusively in "being," but also in "becoming." Therefore the truth of our knowledge also must be essentially subject to change, and hence be not absolute, but relative.

Answer: A little reflection will show this difficulty to be groundless. For, since it is assumed that we *know* the reality thus experienced to be changing, and that therefore our knowledge can attain to this process of change and represent it faithfully (if inadequately), the difficulty is at once seen to vanish. For if our knowledge represents any reality as subject to change, or as actually changing, then in so far as this reality *is* subject to change, or *is* actually changing, our knowledge represents it aright and is therefore true.

Or, distinguish the antecedent: the laws of the world are changed, *we deny;* different events occur, *we grant.* Distinguish the consequent: our knowledge of the laws changes, *we deny;* our knowledge

of events changes, *we subdistinguish:* so that our knowledge of the event becomes false after the event, *we deny;* so that we know one event after the other, *we grant.*

(2) The final reason why we hold anything as certain is the subjective necessity of judging as we do. Therefore truth is relative to the nature of the intellect.

Answer: We deny the antecedent. For, the final reason is because the truth of the thing is clearly manifested to the intellect. Everyone plainly sees the difference between the subjective necessity we have of judging, and the subjective necessity by which an insane person is impelled to judge falsely, *e.g.,* that he is king.

(3) Intellectual progress demands that we should not remain in the same intellectual state and always cling to the same truths. For everywhere, especially in the organic world, there is constant progress of evolution to more perfect forms; hence, there should be like progress in science and philosophy.

Answer: .Progress *does not demand* that we pass from old views to views which contradict the old, except where the old has been proven false. There is progress when a previous opinion is known more fully and distinctly, or when something is learned which before was unknown. Certainly, Astronomy does not demand that we abandon the main points of the Copernican system and go back to the Ptolemaic. *Cf.* Scholion 1 (d).

Progress *forbids* us to continually discard acquired knowledge and adopt contradictory views. For a "progress" in which we do not build upon the old, but continually reject the old for something

new, is not progress, but a continual change between progress and regress, between building up and tearing down, contrary to *organic evolution* progressing from the seed to a more perfect form, which is the model of all genuine evolution.

THESIS IX

"Logical Falsity Cannot Be Found in the Simple Apprehension as Such, but Only in the Judgment"

Falsity (error) can exist in the judgment, provided falsity is proposed to the intellect under the appearance of truth. That is, the intellect cannot tend towards falsity as falsity, but only tends towards falsity under the guise of truth. When, therefore, a false judgment is made, the falsity is not recognized, and the one judging thinks that the judgment is true. For as soon as one recognizes error, he turns away from it. Nor can the will move the intellect to assert as true what it knows to be false; for although the will can divert the attention of the intellect, it cannot change the nature of the intellect.

We can consider three kinds of falsity as we considered three kinds of truth. *Cf.* Thesis VII.

Logical falsity (error) is the positive difformity or disagreement of the thought with its formal object. We say "positive" difformity or disagreement, for difformity can be either negative or positive.

(1) **Negative,** when the thought does not represent anything of an object, or does not express everything that is in the object. But these are instances of "ignorance" and "imperfect knowledge" rather than of "falsity" (error).

(2) **Positive,** when the thought disagrees with the object in that which the thought expresses. In other words, when the thought attributes

to an object what should not be attributed, or denies what should not be denied.

As such, *i.e.,* in the simple apprehension considered in itself, merely as a representation, and without any reference to a preceding or subsequent judgment.

If, however, we consider the simple apprehension not alone, but inasmuch as it is connected with a judgment, we might say:

(1) That an idea might be the *occasion* of error, inasmuch as the obscurity of the idea which does not distinguish one object from another which is like the first, is the occasion, or facilitates the eliciting, of a false judgment. Thus, an obscure idea of a machine for registering fares on a street-car might be the occasion for this machine being called a clock.

(2) That an idea at times *presupposes a false judgment.* This happens when the intellect, because of an erroneous judgment, wrongly applies the definition or a note of one object to another object, or at least forms a composite idea which is not in keeping with that other object. For instance, a person who has considered "thrift" as a kind of "avarice," will afterwards represent a thrifty man as avaricious.

(3) That the term "idea" is sometimes *confused with* the term "judgment." Thus, at times we ask a man what his "idea" of a subject is. In this case, the term "idea" is not used strictly, for it is his "judgment" or opinion we want and not a mere idea. In answer we might say: "Your idea is false." An idea cannot be false, nor has he given merely an idea. He has expressed his judgment or opinion, and this can be false.

Proof of the thesis: Logical falsity consists in this, that the intellect affirms of an object what should not be affirmed, or denies what should not be denied. But this affirmation or denial occurs in the judgment and not in the simple apprehension. Therefore—

Maj.: Definition of logical falsity or error.

Min.: (a) Evident from experience.

(b) Because in the simple apprehension as such, the intellect does not affirm or deny anything.

Cor.: A simple apprehension or idea cannot be false. What is apprehended is so far truly apprehended and cannot be otherwise. The object before the intellect must, of course, be the object before the intellect, just as what a man sees with his eyes, that he sees, even though he should, by mistake in inference, proceed to name it wrongly.[1]

Schol. 1: Falsity can exist in the judgment only "by accident." A judgment would be "of its nature" false, if the intellect of its nature tended towards falsity (error), or were naturally indifferent to truth or falsity.

A judgment can be false "by accident," *i.e.,* the intellect, though of its nature tending towards truth, can, because of something other than its nature, be drawn to falsity or error *under the appearance of truth.* For the intellect, acting according to its nature, always tends towards truth. It cannot accept error as error; and when error does enter into judgments, it is always under the guise or appearance of truth. Hence, the intellect is not acting against its nature when it elicits a false judgment.

Schol. 2: We do not say that error or falsity can exist in *every* judgment; for falsity cannot be found

[1] Rickaby, *First Principles,* p. 16.

in judgments which are immediately evident. *Cf.* Thesis V, Scholion 1.

Schol. 3: The remote reason for error is the limitation of our intellect. The proximate reason, *on the part of the intellect,* is lack of attention and confusion of ideas; *on the part of the will,* complacency in the object that is enunciated in the false judgment, or love of assent, impatience of suspense of judgment, prejudices, passion and emotion, etc.[1]

Difficulties:

(1) There are many more notes in an object than what we apprehend. Therefore ideas are not in agreement with their objects.
Answer: Ideas can be incomplete or imperfect representations of objects; but there can be no *positive disagreement* between ideas and their formal objects.

(2) If there be no false ideas, judgments would not be false; for the judgment only affirms or denies what is apprehended.
Answer: The falsity in judgments does not arise from false ideas. Every idea has a corresponding object, and is a true representation of that object, though the judgment might erroneously unite or separate those ideas.

(3) Error cannot be due to the influence of the will, since the will does not judge, nor does it seek "truth" but "good" as its formal object.
Answer: The will does not judge, nor is "truth" its formal object. Its formal object is "good." But the will is the dominating faculty of man, and, just as a king can procure not only his own good, but also the good of his subjects, so the will can

[1] *Cf.* Coffey, *Epistem.*, vol. 2, p. 366; Maher, *Psych.*, p. 170; Shallo, *Schol. Phil.*, p. 92.

seek not only its own good, but also what is at least apparently good for the other faculties, *i.e.*, urge them to attain their proper objects or what is at least apparently good for them. Now the attainment of truth is good for the intellect, and the intellect can be urged, even unduly, by the will, to the attainment of truth. In consequence of this undue influence, the intellect, without sufficient consideration of the subject, etc., might judge erroneously.

PART II

The Sources of True and Certain Knowledge

In the preceding theses we have seen that it is possible to obtain truth and certitude, and we have examined the nature of truth and certitude. Now we shall investigate the scope and limits of this certain knowledge by an examination of its various sources. Hence, it is the purpose of this part of Epistemology to show: (1) the sources from which different judgments are derived; (2) the conditions under which the judgments from the various sources are true and certain.

A **source** of knowledge is a means by which we acquire new knowledge.

A **means** of knowledge is that which manifests a truth to us.

New knowledge is such knowledge as cannot be *originally* acquired by any other means.

Certain knowledge is such knowledge as we can grasp without fear of error.

A source of knowledge is at the same time a criterion of truth and a motive of certitude, but not vice versa.

A **source**, as we have seen, is a means of acquiring *new* knowledge.

A **criterion of truth** is that which distinguishes truth from error.

A **motive of certitude** is that which moves the intellect to assent without fear of error.

For instance, memory as such can be a criterion, *i.e.,* we can judge the value of new knowledge by knowledge already stored away in the memory; but memory as such is not a source of knowledge, since by memory we merely recall former knowledge.

We either obtain knowledge ourselves or receive it from others.

(1) If we obtain knowledge ourselves, the knowledge is either immediate or mediate.
   (a) If the knowledge is *immediate,* the sources are:
      (1) Consciousness, for present internal facts.
      (2) Sensation, for present external facts.
      (3) Ideas, *i.e.,* from a comparison of ideas to perceive immediately their identity or diversity. This gives rise to immediate analytic judgments.
   (b) If the knowledge is *mediate,* the source is reasoning.

(2) When we receive knowledge from others, the source is testimony. This source is called *extrinsic* or external, in contrast to the above *intrinsic* or internal sources.

THESIS X

"Concomitant Consciousness Is an Infallible Source of Knowledge. Immediate Judgments of Reflex Consciousness Cannot Be False even by Accident, Though Mediate Judgments of Reflex Consciousness Can Be False by Accident"

Consciousness, in general, is *awareness of present internal facts;* or internal or subjective experience. The meaning of consciousness is brought out by contrasting conscious life with the unconscious state of a swoon, or of deep, dreamless sleep. We are said to be conscious of subjective states when we are aware of them in any degree. Not only do we see, hear, think, will, etc., but we are made aware of, or conscious of, our seeing, hearing, thinking, willing, etc.

The objects of consciousness are present internal facts.

Fact, *i.e.,* an individual act of seeing, hearing, thinking, willing, etc. Consciousness *experiences* its object, *i.e.,* perceives it not in the abstract, apart from a subject, but in the concrete.

Internal, in opposition to external facts, which are the objects of sensation. What consciousness reports is limited to the sphere of *self*. Thus, we do not say: "I am conscious of sound," but, "I am conscious of hearing a sound."

Consciousness refers not only the fact, but also the *general* nature of the fact, otherwise we would not be able to distinguish between, *e.g.,* seeing, hearing, etc.

But it does not refer the *specific* or inmost nature of the fact, its causes, exact place, etc. Nor does consciousness refer all internal facts. It does not refer facts pertaining to vegetative life, *e.g.,* circulation of the blood, etc., unless they give rise to sensations.

Present, *i.e.,* facts that are actually affecting the subject. Consciousness is not concerned with past facts, which are the object of memory, nor with future facts, which are known by reasoning. However, the *act* of memory and the *act* of reasoning are objects of consciousness, since they are present, internal facts.

N.B.—Do not confuse consciousness with *conscience* (the intellect judging of the morality of our acts).

Consciousness can be considered as a *faculty, i.e.,* the capability of undergoing a certain kind of activity, or as an *act.*

(a) If we consider consciousness as a *faculty,* it is either sensitive or intellectual.

(1) **Sensitive consciousness** is a faculty by which the subject experiences in a *sensitive way* its sensitive affections and acts, *e.g.,* the awareness accompanying the perceptions of the external senses. At some particular moment, a subject, for example, that is seeing with its external organ becomes aware that it is seeing, or, if hearing, becomes aware that it is hearing. Sensitive consciousness is a property of "animal."

(2) **Intellectual consciousness** is a faculty by which the personal affections, both sensitive and spiritual (*i.e.,* of the intellect and will), are made known to man in an *intellectual manner.* It is a property of "intelligent beings."

Thus, there are bodily affections or modifications, cognitive and appetitive, as sensibly perceived; there are the same as intellectually perceived; and thirdly, there are the spiritual affections, cognitive and appetitive, as intellectually perceived.

(b) If we consider consciousness as an *act,* it is either concomitant or reflex.

(1) **Concomitant** (simultaneous, direct) **consciousness** consists in this, that as often as we have an act of perception, cognition, or appetition, implicitly, in the act itself, we experience or are aware of our cognition or appetition, etc., and of ourselves.

Thus, by concomitant consciousness we are made aware that we not only *think, wish, see,* etc., but in the same act, though implicitly, that *we* think, wish, see, etc.; for the subject is not known independently of the modification, nor the modification independently of the subject.

In other words, by concomitant consciousness we understand that simultaneous experience or awareness which the subject has of its own affections, without any special reference to them. These modifications are not perceived in the abstract, but *in the concrete,* in so far as they are modifications of the subject. For instance, "I feel pain," not "pain" in general or in the abstract, but in the concrete, *this instance of "pain," i.e.,* I feel pain in myself and in so far as it affects me. When, however, I perceive pain in myself, I perceive myself as the subject affected by pain.

(2) **Reflex consciousness** is a new and distinct

cognitive act, by which the intellect explicitly returns upon an act of cognition or appetition, inasmuch as it is a concrete affection or modification of the subject. In other words, it is reflex intellectual knowledge of internal facts inasmuch as they are subjective modifications whose presence is manifested by concomitant consciousness.

Hence, we can define reflex consciousness as "explicitly reflex intellectual knowledge of present affections of the subject inasmuch as they are modifications of the subject, and the subject itself."

Thus, in this act of psychological reflection, the intellect perceives the act of cognition or appetition as a modification of the subject, and the subject itself.

N.B.—Concomitant consciousness is always and essentially present in actual acts of cognition or appetition; reflex consciousness is not always present.

Reflex consciousness can be:

(a) **apprehension,** which consists in the simple apprehension of the personal affection in the concrete, the modified subject; for the object of consciousness is concrete. Thus, one might apprehend himself as thinking.

(b) **judgment,** when the intellect separates this modified subject (self) into subject ("I") and modification, and unites them as subject and predicate of a judgment, *e.g.,* I am thinking.

These judgments can be either immediate or mediate.

(1) **Immediate judgments** are those which express *only* what is manifested by concom-

itant consciousness, *e.g.*, I am experiencing this affection of seeing, I am seeing.

Such judgments, though expressing the *general* nature of the affection (*e.g.*, seeing, thinking, willing, etc., because the manifestation is in the concrete), are not concerned with its inmost or specific nature, nor are they concerned with past or future affections, or with the objective value of the affections, nor do they refer these affections to definite causes or places.

(2) **Mediate judgments** are those which are not based merely upon the testimony or data or report of consciousness, but with the aid of reasoning are deduced from immediate judgments of consciousness. These judgments really belong to reasoning, and are only improperly called judgments of consciousness, though concomitant consciousness is a necessary condition for all judgments.

For instance, "I see John walking down the street";

(a) by concomitant consciousness, I *experience* (am aware of) *this act of seeing,* and *myself* seeing in this instance.

(b) then the intellect by psychological reflection turns upon that act of seeing, and evolves the knowledge obtained by concomitant consciousness, thus: "I am seeing." This is an immediate judgment of reflex consciousness.

(c) this judgment can now be considered with regard to the object expressed by the act of seeing; not as the object here and now affects me (*i.e.*, as a subjective modifica-

tion), but as it is in itself (*i.e.*, the objective value), and can be enunciated: "I see John walking down the street." This is a mediate judgment.

Such a judgment is obtained as follows: "The cognitive faculties are infallible as regards their proper objects. But my cognitive faculties testify that I see John walking down the street. Therefore I see John walking down the street."

As is evident, this conclusion is not based merely upon the testimony of concomitant consciousness, even though concomitant consciousness furnishes the foundation.

N.B.—The infallibility of consciousness cannot be demonstrated, nor does it need to be demonstrated, as will be seen from the proof.

Proof of the first part of the thesis: Arg. I. He who doubts or denies the trustworthiness of concomitant consciousness declares thereby that he doubts or denies its testimony. But only by relying upon the testimony of his concomitant consciousness can he declare his doubt or denial, since these are internal facts. Therefore, he who doubts or denies the trustworthiness of concomitant consciousness would, at the same time, hold that the testimony of concomitant consciousness was unreliable and reliable, or was fallible and infallible, which is absurd. Therefore, to avoid a contradiction, concomitant consciousness must be accepted as an infallible source of knowledge.

Arg. II. If the trustworthiness of concomitant consciousness were doubted, there could be no certain judgments, and

universal scepticism would have to be admitted. Therefore—

Ant.: To have a certain judgment, the intellect must be aware that it perceives the motive urging it to assent without fear of error. But this perception of the motive of assent is an internal fact, and cannot be known by any source except concomitant consciousness. Therefore—

Proof of the second part of the thesis: If there could be error in the immediate judgments of reflex consciousness, it would be there either because we experienced something which did not affect us, or because we experienced an affection in a way different from what it really was. But both suppositions are absurd. Therefore—

Maj.: The disjunction is complete, and under the supposition that the object is present, error always consists in judging an object to be otherwise than it really is.

Min.: (1) The first supposition is absurd, because to experience an affection and to have that affection are evidently the same; otherwise there would be an experience without something experienced, or a perception without an object perceived, which is absurd.

N.B.—Our argument is not: "If I have an affection, I experience it"; but, "If I experience an affection, I have that affection."

(2) The second supposition is absurd, because the immediate judgment of reflex consciousness expresses merely what the subject perceives and inasmuch as the subject perceives it, *i.e.*, the object of this judgment is the affection of the subject as it is per-

ceived by the subject. But it is absurd for such an object to be perceived otherwise than it really is, for then it would be perceived in a manner different from what it is perceived.

These immediate judgments affirm explicitly what is formally and implicitly manifested to consciousness. They are merely an analysis of present internal facts and expressed in the form of a judgment.

Proof of the third part of the thesis: Mediate judgments of reflex consciousness are false either of their nature or by accident. But they are not false of their nature. Therefore—

Maj.: The enumeration is complete, and we know from experience that such judgments can be false.

Min.: Those judgments cannot be false of their nature which are derived from certain and evident judgments by a faculty of its nature infallible. But such are the mediate judgments of reflex consciousness. Therefore—

Cor. 1: Concomitant consciousness is a *source* of knowledge; reflex consciousness is not, for it presupposes the testimony of concomitant consciousness.

Cor. 2: Concomitant consciousness does not judge, but merely perceives. Reflex consciousness perceives and judges.

Cor. 3: We do not say that *all* present internal facts are perceived by consciousness. We speak only of those that are perceived, and say that the facts perceived are truly perceived.[1] Let us exemplify by a camera. You can take a very distinct picture of a very obscure manu-

[1] For the question of subconscious states, *cf.* Maher, *Psych.*, p. 355; Rickaby, *First Principles*, p. 343.

script. It is not a confused photograph of that object, but a very clear and distinct one; the object is confused. So as regards consciousness; its testimony is accurate: it represents as distinct what is distinct, and as obscure and confused what is obscure and confused.

Cor. 4: The certitude which we have in the immediate judgments of reflex consciousness about present internal facts and about our own existence is *metaphysical,* since it is impossible for one to perceive himself as existing, thinking, etc., unless he is actually existing, thinking, etc.

Cor. 5: The immediate judgments of reflex consciousness are *synthetic* judgments.

Cor. 6: The trustworthiness of consciousness is a *condition* of all certitude. For, as we said in the proof of our thesis, in order to have certitude about anything, the intellect should be *conscious that it perceives the motives* which urge it to assent. To make us aware of this perception belongs, as an internal fact, to consciousness; and, unless the testimony of consciousness was reliable, there would be no certitude. Hence, this awareness of the perception of motives is a requisite condition that the motives might exercise their influence upon the intellect. Consciousness is, however, a *motive* (though not ultimate) of certitude as regards present internal facts.

Schol.: The occasion of error in regard to present internal facts is the imagination, for there is no other faculty able to represent objects that are absent, and yet not able to distinguish between the actual presence of an object and its mere representation. The intellect can both represent and distinguish.

As the imagination can represent sensible external objects which are not present, so it can represent also subjective affections of the external senses, *e.g.,* pain

in some part of the body, etc., although they are not present. And the more vivid and clearer these representations are, the more similar they will be to actual modifications. Hence, if the intellect is not alert, it can elicit a false judgment.

Difficulties:

(1) If the testimony of consciousness is reliable, how can a man complain of a pain in the foot after his leg has been amputated at the knee?

Answer: We must simply consider all the facts. In the man spoken of, there are certain nerves which, before the amputation, had their terminals in the foot. Now the nerves are severed at the knee. The whole stretch of nerves from the knee to the foot disappears. The nerves have new terminals at the knee. What may be the result? The result may be that when there is contact with external matter at the new terminals, as the signal that there is a contact will be carried to the nerve centres along the very same lines as from the old terminals, thus affecting the nerve centres in the same way and occasioning the same reaction as before the amputation, the person, if not watchful, may, at the beginning, refer the point of contact to the locality of the old terminals, forgetful, for the moment, of the new.[1]

In other words, the pain is really felt in the corresponding branch of the nervous system, but confusedly. Imagination and custom may cause a person to locate the pain in the missing member. The imagination supplies the missing member, and the sufferer, because of previous habit and the newness of the state, is lead to elicit a false judgment.

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[1] Poland, *The Truth of Thought*, p. 121.

This judgment, however, is a *mediate* judgment of reflex consciousness.

(2) If the testimony of consciousness is reliable, how do we explain the judgments of insane persons who consider themselves kings; of persons who while asleep consider themselves awake; etc.?
Answer: As a matter of fact, they experience affections by which they think themselves kings, etc., and, as is evident, the error does not rest in their experiencing that present internal affection. What happens? When they judge that they are kings, etc., concomitant consciousness makes them aware of judging (that they are kings, etc.). Reflex consciousness examines this act and says: "I am judging (that I am king)." Then comes the judgment giving objective value to the affection, *i.e.*, "I am king," and, as has been said, the judgment about the objective value is a *mediate* judgment, and can be false by accident. Hence, there is no error in the testimony of concomitant consciousness, nor in the immediate judgment of reflex consciousness.

(3) If the testimony of consciousness is absolutely reliable, why are there so many different and contradictory doctrines based upon its testimony?
Answer: Here there are two points involved: the presence of the internal facts and their nature. Now there is no error as regards the presence of the internal facts; but different doctrines arise from the interpretation of the specific nature of these facts.

N.B.—What does consciousness reveal to us about the "Ego" ("I") which we so often use as the subject of propositions?

We claim that since consciousness refers present internal facts *in the concrete,* the data of consciousness (or consciousness *plus* memory, if we take into consideration not only simultaneous but also successive states) reveal the conscious subject as really existing, and as a living, corporeal substance.

(a) **Real existence.** For the fact referred by consciousness is not in the abstract, but in the concrete, *i.e.,* the affection of some subject. Hence, if it is admitted that the affection itself is real, the subject affected must be real. This subject is not the affection or modification, but implied in the present internal affection. No one can assert "I think," without at the same time saying "I exist"; for the expression "I think" means *"I* am thinking."

Moreover, although the internal facts greatly differ one from another, *e.g.,* seeing, thinking, pain, joy, etc., they are, nevertheless, affections of one and the same subject. Now the subject which possesses unity under variety of modifications and to which all internal states are referred, is designated by one word, "Ego," "I," the *personal* pronoun, representing a *person.*

(b) **Substance.** This "Ego," or "I," is a substance, for it does not inhere in another object, but the affections or modifications inhere in it.

Consciousness does not manifest an abstract notion of substance, but a concrete existence of substance, *i.e.,* something existing in itself and not inhering in another as in a subject. By means of analysis, this concrete whole, the affected subject, is distinguished into what exists in itself and what does not exist in itself. Hence, the subject "I" is manifested as a substance.

(c) **Corporeal,** *i.e.,* a *substance having extension*

(parts outside of parts in some way united, and occupying space) *and resistance* (preventing other bodies from occupying that space at the same time). Consciousness, as has been said, refers the internal modifications in the concrete and as ours. In addition, it not only refers them as *distinct* (so that one is not the other), but as *separated (i.e.,* locally distinct, so that one is not present where the other is), although it does not positively report the definite place of the different affections. For instance, I perceive a pain in the head and a pain in the leg as two pains locally distinct. Now, since the individual affections of the "I" are perceived in the concrete, the "I" as affected is apprehended with the affections, the "I" as coextensive with the affections which are locally distinct, and, consequently, as occupying different parts of space.

Moreover, consciousness reports sensations in continuous parts of space, and the "I" as continuous with them. For instance, when I put my hand or whole arm in cold water, or place my hand over a fire.

Finally, consciousness reports that parts of the "I" (*e.g.,* two hands pressing each other) so *resist* each other that one will not allow the other to occupy the same space at the same time.

(d) **Living.** When, for instance, "I think," consciousness reports that I am the principle of activity, inasmuch as I produce it, and also that the result of the activity (the idea or judgment) remains in me. This is called immanent action, and one who performs an immanent act is said "to live."

THESIS XI

"From the Testimony of the External Senses, It Is Certain that Bodies Exist Outside of Us"

It is beyond doubt that every man thinks that with his external senses he perceives objects which are really distinct from, and outside of, himself, and that these objects possess certain qualities such as extension, shape, color, etc. This fact has never been denied even by the most extreme sceptic.

The question to be answered here is: Are men right in so judging? In other words, can we, reflecting on the data of sense-perception, have philosophical certitude for the judgment and belief that those data reveal: (1) the existence, and (2) something as to the nature, of an external, material universe distinct from the perceiving subject or "Ego"? *Realism* affirms that we can; *Idealism* doubts or denies.[1]

Sensation, being the most fundamental and primitive form of conscious life, cannot, strictly speaking, be defined. It may, however, be described as an elementary psychical state aroused in the animated organism by some exciting cause. Sensation is thus a modification not of the soul or principle of life alone (a blind man cannot see), nor of the body alone (a dead man cannot see), but of the living being composed of body and soul.

The power of experiencing sensations in general is termed *sensibility,* while the capacity of the living being for a particular species of sensation is called a *sense.* The special portions of the organism endowed with the

[1] Coffey, *Epistem.,* vol. 2, pp. 19, 37, etc.

property of reacting to appropriate stimuli so as to evoke these particular groups of sensations are called *sense-organs*. A being capable of sensations is described as *sentient*, or *sensitive*.[1]

Sensation must not be confused with the material impression by which the organ is affected by the object, *e.g.*, when the hand becomes hot through the activity of fire. This is merely a physiological process which precedes sensation. "To be hot" and "to feel hot" are entirely different.

Supposing the proof of our thesis, *external senses* are senses whose nature it is to perceive objects which affect us externally.

The following doctrines are opposed to our thesis:

(a) **Idealism**, which doubts or denies that knowledge can attain to any reality beyond the modifications of the conscious Ego. Idealists, however, disagree in assigning the cause of sensation.

(1) **Absolute** (total) **Idealism** denies the existence of any kind of reality outside the knowing subject. The sole knowable reality, the sole object of knowledge, is the subject's own conscious states or "representations." Consequently, the subject is the cause determining sensation. This doctrine is also called *subjective* Idealism. Thus, Fichte, Schelling, Hegel, etc.

In this doctrine, few if any retain the common notion of a personal Ego, thus claiming that while the subject really exists, other men do not. Such a position, known as "solipsism," is clearly absurd. Absolute Idealists generally profess pantheistic Idealism, *i.e.*, they hold the

[1] Maher, *Psych.*, p. 42.

existence of only one being, called the Universal Consciousness or the Absolute, of which the individual consciousnesses which we call "men," are parts or "modes" by which this being manifests itself.

(2) **Partial** (relative) **Idealism,** while admitting the existence of spiritual substances and other intellects, denies the reality of matter. Thus, Berkeley, etc. According to Berkeley, what we consider as qualities perceived by our senses are only intellectual states or ideas produced by God in created intellects. This system is also called *objective* Idealism or *Immaterialism* or *Acosmic* Idealism.

(3) **Transcendental** or **Phenomenal Idealism** (called also Phenomenism or Phenomenalism), while admitting the real existence of things and that objects are in some way a partial determinant of knowledge, holds that we do not know the things in themselves, but only the phenomena (*subjective* appearances) of things. This doctrine, too, is partial or relative Idealism. Thus, Kant, etc.

(b) **Occasionalism** admits that bodies exist outside of us, but denies that they are the causes of sensations. According to the Occasionalists, sensations are immediately produced in us by God, the presence of bodies serving as a mere *occasion.*

Proof of the thesis: If bodies did not exist outside of us, universal scepticism would have to be admitted. But universal scepticism cannot be admitted. Therefore—

Maj.: If bodies do not exist outside of us, intellect is not of its nature infallible, for it naturally, con-

sistently and invincibly represents objects of sensation as bodies really distinct from us, as extended bodies, as bodies having resistance, etc. But if the intellect is not of its nature infallible, universal scepticism must be admitted. Therefore—

Maj.: Because we are impelled *by such evidence* to judge that bodies exist outside of us, that this persuasion is, indeed, a necessity of nature which we cannot put aside even for a moment. Such evidence cannot be doubted without mistrusting all evidence.

Moreover, from the testimony of consciousness, we experience these representations, at times, when we do not wish to do so; and, frequently, when we wish to experience them, we cannot. Indeed, these sensations are so uniform and constant, that it is impossible to judge that they arise from any but necessary causes.

Cor. 1: Hence, the *adequate* cause of sensation cannot be the self, or anything in the self or really constituting or pertaining to the self. There must be, beyond and really distinct from the self, a mind-independent reality which, *co-operating with* the consciously percipient self, will adequately account for the perceptions *de facto* experienced by the latter. Hence, there exists, distinct from the self, and independent of perception, a reality which we call the external, material universe.

Cor. 2: We do not deny that with the testimony of the external senses, a subjective affection is intimately connected; but we reject the opinion of those who try to reduce to "internal subjective facts" everything that is represented by our senses as formally objective.

Cor. 3: The external senses are a *source* of true and certain knowledge, for through them we know present external facts without fear of error. The external world is not known except through sensation.

Cor. 4: The trustworthiness of the senses consists in this, that the senses manifest a thing to us as it really is, *i.e.*, consists in the agreement of sensitive knowledge with its object.

Cor. 5: Idealism renders all experimental sciences meaningless; for, since no certitude could be had about external objects, experimental sciences would be concerned only with empty appearances arising from a natural subjective quality or disposition. Thus, there would be an end to geology, palæontology, astronomy, etc. Common and scientific experience, on the other hand, make a distinction between subjective modifications and external objects, between "self" and the physical world.

Schol. 1: Our argument is not weakened by having recourse to a plurality of faculties in order to avoid universal scepticism; for, by admitting that even one faculty is naturally fallible in regard to its proper object, all certitude is destroyed.

Schol. 2: Sensations, like all cognitive acts, can be considered from a double view-point: as subjective modifications and as perceptions of objects. Inasmuch as they are subjective modifications, they pertain to the subject-matter of consciousness. However, as representations of objects, they are means or sources of knowledge, and thus pertain to Epistemology. An inquiry into their nature, their mode of existence and their origin, pertains to Psychology; while an investigation into the corporeal change pertains to Physiology.

Schol. 3: If the appearances of bodies were produced by the "self" alone, there would be no difference be-

tween first impressions and those recalled. As a matter of fact, however, they differ greatly in a normal person: (1) by reason of the intensity of the impression and clearness of representation, *e.g.,* the sight of the sun during the day, and the representation which I have at night when I think of the same sun or picture it in my imagination; (2) in variability, for the phantasms that are recalled can be changed at will, while in the impressions received, *e.g.,* through sight, nothing can be changed.

Schol. 4: Besides myself, there are other intellects and other men. This requires that the report of the senses which manifest their bodies be valid, for intellects do not communicate with each other immediately, but only through the organism, by speech, writing, or gestures.[1]

Difficulties:

(1) In order to know that the subject is not the adequate cause of sensations, we should know all the powers of the subject. But this is impossible. Therefore—
Answer: In order to know that the determining cause of sensation is not within us, we need not know positively what the "Ego" can do; it suffices to know *negatively, i.e.,* what the "Ego" cannot do.

(2) To be certain about the existence of bodies, we should be able to compare our sensations with the bodies. But this is impossible. Therefore—
Answer: We deny the supposition, *scil.,* that sensations are objective signs by which we know bodies. Sensations are *formal signs* of sensible properties. Of course we can, by reflection, consider these sensations, these direct cognitive acts.

[1] Rickaby, *First Principles,* pp. 269 and 275.

They are, indeed, realities; but realities of a special kind, inasmuch as *they are not merely objects of cognition* (when we reflect upon them), *but are themselves cognitions of objects.*

(3) All that we are aware of must be present in consciousness, and we can become aware of it only in so far as it is present in consciousness. To speak, therefore, of perceiving or becoming aware of a thing existing independently of consciousness, is a contradiction in terms. Hence, the only *"esse"* of things is their *"percipi."*

In other words, to know an object, the object known should be in the knowing subject. But an external object is not in the knowing subject. Therefore we cannot know an object distinct from the knowing subject.

Answer: The object known should be physically or entitatively in the knowing subject, *we deny;* should be representatively in the knowing subject, *we grant.*

This objection involves, in the first place, a misconception of the realist's position. For, when we say that we perceive a datum which is really external to and other than the self, we do not mean that this datum, when being perceived, stands out of all relation to the perceiver. To say so would be a contradiction in terms: to perceive an unperceived thing or know an unknown thing. The condition that the external reality, in order to be perceived, must become cognitively present to, or one with, the perceiving self, obviously renders not the *reality* itself, but the perception of the reality, dependent on and relative to the perceiver.

In the next place, the objection involves a gratuitous assumption: the assumption, namely, that

whatever is an object of cognition must be immanent in the conscious subject in the sense of being a determination of the latter as conscious, and cannot be anything transcending, or existing beyond and independently of, the latter.

(4) To put the same difficulty in another way: The plain man believes the spatial world to exist whether anyone knows it or not. Consequently, he allows the world is outside the mind. But to be known a reality must be inside the mind. Therefore the plain man's view renders knowledge impossible.

Answer: "Being inside the mind" only means "being an object of apprehension"; while "outside the mind" means that the world is something independent of the mind. Hence, the assertion that to be known a reality must be inside the mind, should only mean that a reality, to be apprehended, must really be object of apprehension.[1]

[1] Coffey, *Epistem.*, vol. 2, pp. 46 and 51.

THESIS XII

"Under Due Conditions, the External Senses Are Reliable in Regard to Their Proper and Common Objects"

In the preceding thesis, we showed that by the aid of the external senses we become certain about the existence of bodies outside of us. Now we shall establish the trustworthiness of the senses in regard to the qualities of bodies. And we assert that the external senses are truly sources of knowledge in this regard, and not occasions of error, so long as certain conditions are fulfilled.

In other words, the immediate judgments of the intellect, based upon the testimony or data of the external senses, cannot be false under requisite conditions.

A **sense** is an organic faculty which perceives corporeal objects according to their material qualities.

A **faculty** is the capability of undergoing a particular kind of activity.

An **organ** is a part of the body having a peculiar structure for the exercise of some vital function. An **organic faculty** is a faculty residing in an organ and exercising its activity only through an organ.

Corporeal objects (bodies) are substances that have extension and resistance. An object has *extension* when it has parts outside of parts, and occupies space. An object has *resistance* when it prevents other bodies from occupying that space at the same time.

Material. For the senses perceive only the external accidents of bodies, not the inmost nature of bodies or accidents.

External senses are senses whose nature it is to perceive objects which affect us externally. In other words, an external sense is the faculty of perceiving external bodies by an impression received upon the organ.

The **object** of sensation is that which is perceived by the faculty of sensation, and is called the **sensible object.**

(1) A **proper sensible object** is that quality which is grasped by some one sense alone, *i.e.,* the proper sensible objects are the qualities in bodies which correspond to the specific energies of the several senses. They are the formal objects, or appropriate stimuli of the different special senses.

Thus, each of the external senses has an object proper to itself, an object which cannot be perceived by any other sense.

N.B.—The senses always perceive their objects *in the concrete, e.g.,* a colored object, a resisting body, a sounding body, etc.; not in the abstract, *e.g.,* color (in general).

(2) **Common sensible objects** are those qualities in bodies which manifest themselves through, but simultaneously with, the proper sensible object. They are not mediate acquisitions derived from the latter (p.s.o.), but forms of reality directly revealed through them.

The following are the generally accepted common sensible objects: magnitude, number, figure, motion, rest.[1] They are called "common," because they do not

[1] For the perception of size, depth, motion, etc., *cf.* Maher, *Psych.*, p. 63.

pertain to one sense alone, but can be perceived by more senses than one.

The question regarding the number of external senses is not of much importance, since the same reasons hold for all the senses, whatever their number might be. In the scheme of five external senses (taste, smell, hearing, sight and touch), the eye reveals to us color (light), the ear sound, the nose smell, the tongue taste, and touch pressure. Thus, the formal object of sight is color (light); of hearing, sound; of smell, odor; of taste, sapor; of touch, pressure (resistance). These objects, however, are perceived *in the concrete*.

If this classification be adopted, it must be remembered that under the sense of "touch" are comprised many groups of states importantly different in quality, and frequently attached to parts of the organism of very specialized character, *e.g.*, the organic sensations; the sensations of temperature; touch proper; and muscular sensations.

The **organs** of the external senses are: eyes, nostrils, ears, tongue-and-palate, entire-body-surface.[1]

Due Conditions; *i.e.*, conditions which are required for normal sense-perception. A sensitive faculty is organic, and undergoes internal change from which defects can arise which might render it less fit for its proper function. Moreover, the mere faculty is not sufficient of itself for a cognitive act, but must be determined by the object: either the object itself must come into immediate contact with the organ, as happens, for instance, in taste; or the object must exercise a mediate influence through something intervening between it and the organ. Hence, for a normal

[1] Poland, *The Truth of Thought*, p. 99; Dubray, *Intro. Phil.*, p. 46; Maher, *Psych.*, p. 63.

cognition, certain conditions must be fulfilled on the part of the faculty or sense, on the part of the object, and on the part of the medium.

(1) The *senses* must be:
   (a) healthy, *i.e.,* without congenital or acquired defect (*e.g.,* Daltonism).
   (b) rightly disposed or fit for the perception of the object,—not impaired by a previous sensation. Thus, when the eye has been fixed for a time on a brilliant light, it cannot at once perceive objects clearly. Weariness, also, will impede sensation.
   (c) applied according to the norm of their nature (*e.g.,* not half awake); with proper attention, etc.

(2) As regards the *necessary union* of the object with the sense, either there should be contact of the object with the organ, or there should be a *medium* which is proper and homogeneous, whether, *e.g.,* ether, or glass, or water. Some electric lights, for instance, are not the proper medium for colors; etc.

(3) The *object* must be proper and proportioned to the sense as regards size, distance and motion. In other words, not too far away, nor too small, etc. Moreover; there must be, as we said, a union of some kind between the object and the sense-faculty.

N.B.—That the conditions required for the right perception of a proper sensible object are also required for the right perception of a *common* sensible object, is evident from the fact that a common sensible object is not perceived by itself, but together with and through a proper sensible object.

A further condition is required for the

perception of *common* sensible objects of sensation, namely, that all the senses should be applied to which the common sensible object pertains. However, knowledge already acquired can be substituted for the application of another sense.

In our thesis we say that, under due conditions, the senses are a true source of knowledge, and that *their testimony is reliable.* In other words, the intellect, acting upon such testimony, is infallible in its *immediate judgments, i.e.,* in those judgments immediately following upon normal sense-perception in regard to proper and common objects of sensation. Such judgments are not, *e.g.,* "I see a rose," or "I taste sugar," since these are rather *mediate* judgments; but, "This body is red," "This is sweet," etc. These immediate judgments are always singular, for the senses perceive only singular objects.

N.B.—We do not wish to decide the nature of the proper sensible object, whether it is formally in the object or merely causally, *e.g.,* is color in the eye or in the object? But we do affirm that there are formally in the bodies which determine these sensations in us, qualities corresponding to the sensations produced; and if, under proper conditions, my sense refers to a body as "brown," that body is "brown" (either formally or causally), and not "red" or "yellow."

Proof of the thesis: The external senses, under due conditions, are infallible in attaining the end for which they are destined by nature, *i.e.,* they are reliable. But to represent proper and common sensible objects is the end for which the senses, singly and collectively, are destined by nature. Therefore—

Maj.: The external senses are necessary faculties, and must act when the proper conditions are supplied.

Min.: Evident from experience. For, when the proper conditions are present, the different senses necessarily and naturally represent their proper and common sensible objects whether we wish to perceive these objects or not.

The same argument in another form: The special effect to which any potency is naturally ordained is infallibly obtained, if all the requisite conditions are present. But the perception of proper and common sensible objects of bodies is the special effect to which the external senses are naturally ordained. Therefore the perception of proper and common sensible objects of bodies is infallibly obtained, if all the requisite conditions are present.

Maj.: It is a contradiction for a potency to be naturally ordained towards a certain effect and not to produce that effect under proper conditions. To have a certain potency is evidently the same as to be able to produce a certain effect. Hence, when all the requisite conditions for acting are present, it should be able to produce that effect.

Min.: Sensation is a natural act, inasmuch as when the senses, either by choice or by spontaneous attention, are directed to any object, sensation necessarily takes place according to the laws of nature, and independently of the will.

Cor. 1: The external senses, we repeat, are a *source* of certain knowledge, for through them we know present external facts without fear of error.

Thus, Realism is justified in maintaining that we have adequate intellectual justification for (a) the spontaneous judgment that a real, external, material universe

exists independently of our perception of it; and for (b) many of the spontaneous judgments we form as to its qualities; while (c) reflection can correct the errors of the spontaneous judgments too hastily formed by misinterpretation of our sense-perceptions.

Cor. 2: One must carefully distinguish between the mere representation of the data to the perceiver, and the judgment whereby the perceiver interprets it as being such or such.

The senses themselves neither err nor deceive. They do not err, because *they do not judge,* but merely present a something, an object, to the conscious perceiver. They do not *themselves* deceive, because they always present that precisely which under the circumstances they must; they simply could not present a datum other or otherwise than they actually do; according to the organic condition in which they are, and according to the condition in which the external influence impresses them.

But the presentation of a sense-datum can be the *occasion* of deception to the perceiver, inasmuch as the latter may judge that the datum is external, or how it is externally, without adverting to the fact that the perceived datum is partially determined by the condition of his own organism, and that this condition is, perhaps, abnormal. And just as the subjective organic condition of the perceiver may be the occasion of error in his judgments, so may the abnormal condition of the external thing itself, or of the physical medium spatially intervening between the latter and the sense-organ of the perceiver.[1]

When the sensible qualities perceived by a given sense are the same, the sensible representation (at least in regard to these qualities) is the same. But the substance

[1] Coffey, *Epistem.*, vol. 2, p. 93.

underlying these qualities may be altogether different, *e.g.*, in a living rose, an artificial rose, and the image of a rose formed in front of a concave mirror. In such cases, the sense-representation may readily give occasion to the false judgment that the artificial rose is really a living flower.[1]

Cor. 3: Sensation as a present internal fact, a subjective modification, is the object of consciousness. In this thesis, however, sensation is considered objectively, as representative of external facts.

Schol. 1: How can we avoid errors as regards sensations? The senses cannot correct their data, for they cannot reflect. The intellect cannot correct the senses, for it has no power over their acts, *e.g.*, even though we *know* that the railroad tracks are parallel, they *seem* to converge. But the intellect can, by attending to actual conditions, either at the time or at least by reflection after the fact, either forestall or correct erroneous interpretations.

Schol. 2: We can be certain that the requisite conditions for sensation are present.

(1) As regards the conditions on the part of the *subject:*

(a) It follows as an inference from the proof of our thesis that the senses of men are not generally and ordinarily defective. Defects, which are the exceptions, will manifest themselves when the occasion presents itself of comparing our judgments with the judgments of other men.

(b) That our senses are not in an unhealthy condition is evident from the fact that we are not troubled, pained, etc., and from the clear and unimpeded exercise of the senses.

[1] Shallo, *Schol. Phil.*, p. 82.

(c) What accidently hinders the proper disposition of the senses can be detected by attention. Thus, when the eye gazes for some time at a bright color, it is not disposed for the proper perception of other colors.

(2) As regards the conditions on the part of the *object:* when these are not present, there is lacking that clear perception which urges the intellect to judge.

(3) That the *medium* is unusual or abnormal can become manifest by its immediate action upon the various senses. Moreover, the fact that the object is represented otherwise than it is ordinarily, will call for added attention.

N.B.—(1) We say that we *can be* certain that the requisite conditions are fulfilled. We do not, however, claim that we are always certain. For it can happen that a defect either in the organ or in the medium might be so hidden as to be difficult to detect. As a result, one might err and remain in error for some time. Moreover, we do not deny that a person might have some defect, *e.g.,* a degree of Daltonism, for a long time, even for life, without knowing that he has this defect. However, there will be reason to doubt if the testimony of one sense contradicts that of another; if my testimony is opposed to the testimony of other men; if my testimony is opposed to a truth gathered from other sources; etc.

(2) We can know that the requisite con-

ditions are present *without being involved in a vicious circle;* for it is not a vicious circle to distinguish between the true and false acts of a faculty which is *of itself* trustworthy.

Schol. 3: An accidental object of sense is that which in itself is not attained by a sense, but is said to be accidentally or concomitantly sensible, because it is objectively conjoined with the data that are the objects of sense-perception proper. Thus, substance, life, cause, etc., although in themselves not objects of sense, are called sensible, *i.e.,* accidental objects of sense, because they manifest themselves through some sensible forms.

Thus, while the sense perceives the proper and common objects of sense, the *intellect* abstracts the essence of the same object and conceives that alone. That which the intellect *immediately* perceives in the sensible object is called the accidental object of sense. Thus, when sight perceives a red body, the intellect abstracts the notes of *being, substance, body,* etc.; when the senses perceive anything occur, the intellect abstracts the notions of *cause* and *effect;* when the senses perceive an object moving itself, the intellect abstracts the notion of *life,* etc.

A sense experiences its object, *i.e.,* perceives it *in the concrete.* Hence, properly speaking, sight does not perceive color (as if in the abstract and without a subject), but *this colored object.* Now an object in the concrete includes the essence, etc. (accidental object).

Again, although we *see* only *colored surface,* and *taste* only such a sense-quality as *sweet,* and *touch* only a *hard, cold, resisting* surface, we nevertheless say, "I see a *man,*" "I taste *honey,*" "I feel *ice,*" etc. But "man," "honey," "ice," etc., are substances, and, *as such,* are objects only of thought or conception, not of percep-

tion. Hence, as such, they can be said to be perceptible or sensible only *accidentally* or concomitantly, inasmuch as the concrete data which are directly attained by sense really and objectively embody these other objects which are apprehended only by the intellect, *viz.*, substance, cause, etc.

Likewise, an object which is itself an object of one sense, might become an *accidental* object of another sense. Thus, I may say: "I *see* the *sweet honey*." But I do not really *see* the *sweetness*. Sweetness is *itself* an object only of taste. What I see is the *colored surface* of that which I otherwise know to be also sweet. Thus, sweetness is indirectly or concomitantly an object of vision: it is accidentally visible.[1]

In order, therefore, that something might be an *accidental* object of any cognitive faculty, (1) it must itself be an object of some other cognitive faculty of the knowing subject; (2) it must be objectively conjoined with what is itself an object of the former faculty.

Schol. 4: Error more readily arises as regards the accidental object of sense, than as regards the proper and common objects; and is more frequent regarding the common sensible object, than regarding the proper sensible object.

Difficulties:

(1) A straight stick partially immersed in water and seen obliquely appears bent. Therefore the senses are not reliable.

Answer: We must remember that the shape or figure of the stick is not the proper object of sight. Moreover, the medium through which the different parts of the stick affect the eye is not uniform. When we judge that the stick is broken, the mis-

[1] Coffey, *Epistem.*, vol. 2, p. 79.

take arises from the fact that a rash and imprudent intellect so mixes up appearances and reality, as to judge one to be the other.

(2) Does the distinction between normal and abnormal perception make truth and certitude about the qualities of objects dependent on the *common consent of men?* In other words, is the ultimate test of the truth of the individual perceiver's interpretations of his own perceptions not their "sense-evidence" for *him,* or "what they appear" to *him,* but this as checked by what they appear to the general mass of mankind?

Answer: No, for this would be to fall into a vicious circle. Moreover, the individual perceiver cannot know that other men *exist* unless by first believing the evidence of his senses: so that what or how things appear to them cannot underlie or replace the evidential function of what or how things appear to himself. What really happens is that he commences by accepting the latter evidence; that he gradually finds it *corroborated* by what he learns of other men's experience, or that if any of his own senses be abnormal, he soon discovers the discrepancy between the verdict of this sense in his own case and the corresponding sense-verdict of men generally. When, for instance, I say: "This field of poppies is really and externally red," my *reason* for saying so is because it *appears so* to me; and I know the reason to be valid because I have verified by experience the assumption underlying it, *viz.*, that I am a normal perceiver.

(3) From the true relativity of knowledge, there arises the general difficulty: If what is consciously apprehended in sense-perception is even partially dependent on the perceiving subject, then sense-

perception does not reveal to us extra-subjective or extramental reality as it is in itself. Hence, the realist interpretation of sense-perception is unwarranted, and must be abandoned for Idealism. *Answer:* Such relativity is necessarily involved in the very nature of knowledge, but it in no way destroys the worth of that knowledge. Applying this to sense-perception, the perceiver merely holds that such subjective influence, and such relativity of sense-realities to the perceiver's own organic constitution, being inseparable from the very nature of the perceptive process, are tacitly understood to be always there, but are likewise understood *when normal* not to affect the truth of the judgment whereby he interprets those sense-realities to be "really" (and "externally" in the case of "externally appearing" data) as they appear to the normal perceiver.

In other words, though it must be admitted that the specific qualities with which reality is presented to the conscious perceiver are partially dependent on the subjective factor which is the perceiver's own organism, still, in the case of normal sense-perception, this dependence is ignored, *i.e.,* we abstract from it. It is tacitly understood to be always present.[1]

(4) The senses are not reliable, for many errors arise from the senses as regards figure, size, motion, distance, etc. Thus, wood which is filled with pores appears continuous; the moon appears level and much smaller than it really is; to those sailing in a boat, the shore appears to move; the stars appear

[1] Coffey, *Epistem.*, vol. 2, pp. 153 and 156. For a distinction between the false sense in which the relativity of knowledge is understood by Idealists and the sense in which it can be truly said that all knowledge is relative, *cf.* Maher, *Psych.*, p. 157.

at rest, as does a wheel moved rapidly about an axis; etc.

Answer: Errors arise from the senses themselves, *i.e.,* inasmuch as they report their objects falsely when they are rightly disposed and applied, *we deny;* it often happens that a rash judgment will pass beyond what the senses truly and positively report, *we grant.* Distinguish the consequent: judgments based upon the report of the senses are not infallible of themselves, *we deny;* are not absolutely infallible, so that even accidental error is excluded, *we grant.*

(5) Even when all conditions are present, different people elicit different judgments about objects, *e.g.,* as regards resistance, sweetness, etc.

Answer: Different people pass different judgments about the same formal object, *e.g.,* resistance, sweetness, etc., *we deny;* about the grade of intensity of each quality, *we subdistinguish:* because with the perception of the external sense there is at the same time a perception of something subjective by the internal sense (consciousness), *i.e.,* one's own act of resistance; or the condition of the organ is somewhat different, and, consequently, the perception itself, *e.g.,* of sweetness is more intense, *we grant;* under exactly the same conditions, *we deny.*

(6) To be certain that the senses are reliable, I should know that the conditions are fulfilled. But I cannot know that the conditions are fulfilled except by using the senses. Therefore there is a vicious circle, and I cannot be certain.

Answer: A knowledge of the conditions is required in order to know in a concrete case that the senses are not deceived by accident, *we grant;* to

know that the senses of themselves are not unreliable in regard to their objects, *we deny.* Distinguish the minor: one cannot know that the conditions are fulfilled except by again using the external senses, *we deny;* one cannot know that the conditions are fulfilled, unless through consciousness and the intellect he attends to the circumstances of the external sensations, *we grant.* Distinguish the conclusion: there would be a vicious circle if one attempted to attain certitude merely by the same external senses, *we grant;* if certitude is obtained with the added attention of consciousness and intellect, *we deny.*

THESIS XIII

"The Intellect of Itself Is Infallible in Forming Immediate Analytic Judgments"

In this thesis we wish to examine the third source of immediate knowledge, *ideas,* and see what kind of certitude there is in judgments drawn from this source. Ideas are a source of both immediate and mediate knowledge, but mediate knowledge will be considered in the next thesis.

We have seen that there are universal ideas and that these have objective value. Now, the intellect can *reflect* upon these ideas (as representations) and compare them. Thus it discovers new relations of identity or diversity, and can express these relations in the form of judgments. The universal ideas (direct universals), *e.g.,* "whole" and "part," thus constitute a *new* source of knowledge, for these relations cannot be known from any other source.

Judgments are divided into synthetic and analytic, both of which might be either immediate or mediate. In the theses about the testimony of consciousness and the testimony of our external senses, we saw that the intellect is infallible in forming immediate *synthetic* judgments, and now our attention is turned to immediate *analytic* judgments. *Mediate* judgments, both synthetic and analytic, will be considered, as we said, in the next thesis.

An **immediate judgment** is one in which the agreement or disagreement of the subject and predicate is perceived without a middle term.

An **analytic judgment** is one in which *either* the predicate is contained in the comprehension of the sub-

ject, *or* the subject in the comprehension of the predicate. The identity between the subject and the predicate is perceived by the mere analysis and comparison of both concepts; experience is not the motive for assenting, *e.g.*, "A whole is greater than one of its parts."

Foremost in this class of analytic judgments rank axioms or first principles, *e.g.*, the principle of contradiction ("The same thing cannot be and not be at the same time and under the same respect"); the principle of causality ("Every event or new being requires an efficient cause"); and also such mathematical principles as: "A whole is greater than any of its parts"; "Two things which are equal to the same third thing are equal to each other"; etc. They are called *first principles,* because they are demonstrated by no higher proof, but both prove themselves from their self-evidence, and form the basis of all demonstrative argument. In other words, we do not speak here of all analytic judgments, but only of those that are obvious and require no demonstration. That is, we speak of principles or judgments that stand in the very beginning of intellectual life, and that are admitted even before or without verification by experience.

Immediate analytic judgments are also called "necessary," "absolute," "a priori," "universal," judgments.

Necessary, because they allow of no exception, and their negation is absurd; the predicate enunciates notes which either constitute the essence of the subject or flow from it.

Absolute, because they are independent of any condition.

A priori, because they do not need to be verified by experience before their truth is accepted.

Universal, both in regard to the knowing intellect, which cannot fail to perceive their truth, and in

regard to their range of application, for they admit of no possible exception at any time or in any place.

N.B.—(1) Our thesis cannot be demonstrated, consequently, it is proved indirectly.

(2) We affirm that the intellect cannot err *of itself*. We admit that it can err by accident, inasmuch as through inadvertence there can be some defect in the right apprehension of the subject or predicate, which are the matter of such judgments.

Proof of the thesis: If the intellect were not of itself infallible in forming immediate analytic judgments, universal scepticism would have to be admitted. But universal scepticism cannot be admitted. Therefore—

Maj.: In every judgment we presuppose at least the primary analytic judgments: the principle of contradiction, the principle of sufficient reason, etc. Primary principles are the foundation of all knowledge. If, therefore, the intellect were fallible in regard to these immediate analytic judgments, it would be fallible in all things, and we could not be certain about any judgment. Hence, universal scepticism.

In these judgments, the intellect merely affirms what the subject idea and the predicate idea manifest to it, *i.e.*, it merely examines and expresses notes which are at once apparent in the object. Hence, if the intellect of itself could err in such judgments, the aptitude of the intellect to attain truth would be vain and universal scepticism would result.

Cor. 1: Ideas are thus the *source* of knowledge, while the *analytic judgment is the expression of that knowledge*. Ideas are a source of knowledge inasmuch as the intellect, by ontological reflection and analysis,

discovers the relation between these ideas. Hence, by immediate analytic judgments the intellect discovers principles, and knowledge (*e.g.,* of the subject) which was confused becomes distinct.

Cor. 2: Hence, laws of thought are also laws of existence. As universal ideas have objective value, so the ontological relations between those ideas, which the intellect in judging brings out and enunciates as principles, have the same objective value. Thus, *e.g.,* the principle of contradiction not only demands that we should not think the same thing to be and not be at the same time and under the same respect, but also forbids anything to be and not to be at the same time and under the same respect.

Cor. 3: Our certitude in immediate analytic judgments is absolute and metaphysical, being based upon the essences of things. For the predicate is the definition of the subject, or part of the definition, or a property.

Cor. 4: Hence, first principles are immediately of themselves and absolutely certain. For the force of these principles does not arise from experience, nor from any blind instinct of nature, nor from a purely subjective necessity; but from the immediate knowledge and apprehension of the concepts, by which we see that the thing is so and cannot be otherwise. Descartes, then, was wrong when he said that God could make 2 plus 3 equal 4 or 6; for mathematical equations express abstract relations, and are true wherever there are, *e.g.,* "2" and "3." Likewise, J. St. Mill was wrong when he claimed that mathematical judgments were merely synthetic, so that in another world "2 plus 2" might not be "4."

Cor. 5: If there were no immediate analytic judgments, no indemonstrable truths, there would be no science and no demonstration. Science presupposes demonstration, and demonstration is based upon immediate analytic judgments; otherwise every demonstra-

tion would depend on an endless series of proofs, and no certain conclusion would be possible.

Schol. 1: These principles are not formulated by all intellects, but they are implicitly recognized by all. Ask a child to give you half his apple, and try to convince him that he will lose nothing by it and that what will be left is as big as the whole apple. Likewise, a man may not be aware that he is applying the principles of causality and of sufficient reason when he concludes that his house has not built itself, but requires an architect; yet he will consider it absurd to require proof for his assertion.

Schol. 2: Are analytic judgments in any way based upon experience? Yes. They rest upon experience inasmuch as experience presents through the senses the concrete instances from which the intellect obtains the ideas compared in such judgments. Experience can be the occasion of forming concepts of every judgment; but mere experience, no matter how protracted, can never furnish an adequate objective ground for asserting an *absolutely necessary nexus,* an absolute *must be,* between them as subject and predicate. *Experience is not our motive for assenting.*[1]

Difficulties:

(1) Immediate analytic judgments do not express new knowledge; for they are merely tautological, and are reduced to the formula: "A is A."

Answer: A tautological proposition never gets beyond the *meaning of the words, e.g.,* a quadrilateral is a four-sided figure. There is no analysis of the object of which one is thinking or speaking; the statement made is merely verbal. On the other hand, the unfolding of the nature of an object of thought does not mean a mere verbal explanation.

[1] Coffey, *Epistem.*, vol. 1, p. 153. For a presentation and criticism of the Associationist and Evolutionist theories, *cf.* Maher, *Psych.*, pp. 281 and 286; Coffey, *Epistem.*, vol. 1, pp. 149 and 154.

Thus, the analysis of the object called a *triangle,* is *three-sided* figure, not *three-angled.*[1]

Consequently, there is no tautology ("A is A") in immediate analytic judgments; for we can have a knowledge of the subject idea without perceiving that it necessarily contains this or that predicate. Hence, in these judgments our knowledge is increased, *e.g.,* in a definition, and the formula would rather be: "A is B."

(2) First principles have only experimental value, since they are drawn from experience.
Answer: Cf. Schol. 2 and Cor. 1.

[1] Clarke, *Logic,* p. 52.

THESIS XIV

"Reasoning, Both Deductive and Inductive, Is a Source of Certain Knowledge"

Thus far we have considered immediate judgments, both synthetic and analytic. Now we shall consider mediate judgments, which are nothing more than conclusions formed through a process of reasoning. We claim that reasoning is a true source of knowledge, since by reasoning we can acquire a knowledge of truths which could not be obtained from any immediate source. We grant, however, that reasoning is not completely distinct from, and independent of, the three sources of knowledge.

Reasoning is that act of the intellect by which the agreement or disagreement of two ideas is perceived through the medium of a third idea. Or, reasoning is the act by which from two given judgments, the intellect passes to a third judgment distinct from these, but implicitly contained in them. The essence of reasoning lies in the objective nexus between the subject and predicate of the conclusion and the middle term.

According to the nature of the premises, reasoning may be:

(a) **pure,** *i.e.,* when the judgments in both premises are analytic (whether immediate or mediate).

(b) **experimental,** *i.e.,* when the judgments in both premises are synthetic.

(c) **mixed,** *i.e.,* when one premise is analytic and the other synthetic.

N.B.—(1) In our thesis we treat particularly of categorical reasoning. We shall speak of the hypothetical syllogism in the scholion.

(2) We suppose the reasoning process to be materially true and formally correct.

Deduction is the reasoning from the universal to a less universal, to the particular, or to the individual.

The basis of Deduction is the principle that whatever is predicated, whether affirmatively or negatively, of any logical whole (universal) may be predicated in like manner of whatever is a logical part of that whole.

It must be carefully noticed that in this principle, the subject of which the affirmation or denial is made, is not regarded as a collection of individuals. This would reduce inference to a barren tautology: for if the subject is regarded as a collection of individuals, no inference is required to affirm the attribute of them taken singly. The general proposition has already affirmed it of *each*. Such judgments as these, which are really a matter of counting heads, are called *enumerative* judgments. In the principle, the universal subject is the species or genus as such, the logical whole. This appears clearly if we state the proposition in the generic form: "Man is vertebrate." Our reason for employing the prefix "all" is to emphasize the distributive force of the subject, not to show that our knowledge is to be viewed as the result of an enumeration. It is possible to attain a knowledge of the species without knowing each member of the class. . . . We cannot have experimental knowledge of all men. There is therefore no tautology, when we infer from a logical whole to one of its parts.[1]

[1] Joyce, *Principles of Logic*, p. 187.

Induction is the process by which we pass from the particular to the universal, or from the less general to the more general.

(a) If we consider Induction according to the *nature of the facts,* it is divided into physical and moral.

(1) **Physical Induction** is the process by which we derive physical laws from the observed properties and activities of objects pertaining to physical nature.

(2) **Moral Induction** is the process by which we learn what men, in general, are accustomed freely to do, from an examination of men's activities in certain circumstances. Moral Induction gives rise to moral certitude. It is the sort of certitude that prevails in regard to the subject-matter of the ethical, social, political and economic sciences. The laws established in these sciences are based upon the undeniable existence of uniform tendencies implanted in human nature.

N.B.—When there is question of Induction, physical Induction is generally understood.

(b) If we consider Induction according to the *number of facts of which we have experience,* it is divided into complete and incomplete.

(1) **Induction is complete,** when we predicate of a whole class that which we have already predicated from experimental reasons, of each individual in the class. Thus, if I argue that January, February, March, etc., all have twenty-eight days or more, I cannot be wrong in concluding that all the months

of the year have twenty-eight days or more. This is a summary, rather than strict reasoning.

(2) **Induction is incomplete,** when we rise to a universal law from our experience of a limited number of cases. It begins, therefore, from the experience of particular facts, from the observance of which, laws or general principles are discovered. Incomplete Induction does not depend as much upon the number of individuals as upon the change of circumstances under which the experiments take place.

N.B.—As regards Induction, the problem for solution is this: our experience is limited to a comparatively small number of individual cases. Yet in many instances, we assert a universal law of nature which embraces not merely the cases we have observed, but all other members of the class, *e.g.,* all diamonds are combustible.

The questions arise: (a) *By what right* do we assert such universal laws? (b) Can such laws be called certain? The question, however, is about the *possibility* of such laws, and not about the fact. For we do not ask whether there are any such laws established by Induction, but whether such laws are *possible.* Briefly, can we be certain about the universal laws of nature?

Some of the adversaries against *Deduction* claim that all reasoning from the universal to the particular involves the fallacy of vicious circle: no reasoning from generals to particulars can, as such, prove anything; since from the general principle we cannot infer any particulars but those which the principle itself assumes

as known.[1] They mistake the unimportant collective judgment for the genuine abstract universal.

The whole Empirical school of philosophers rejects strict universal judgments and analytic principles, because it does not admit universal ideas. According to these philosophers, the sole sources of knowledge are individual sense-experiences, and the propositions which we call universal are mere *enumerations, i.e.,* collections of relations which we have experienced.

In explaining *Inductive conclusions,* the Scottish school, Wm. Hamilton, James Mackintosh, Dugald Stewart, etc., held that reason could not securely pass from some facts to all facts, unless it were urged by an instinctive belief to admit the generality and constancy of the laws of nature.[2] Others have recourse to the principle that the future will resemble the past (Hume), others to associated repetition of uniform experience (Mill).

Proof of the first part of the thesis (reasoning is a source of knowledge):

Arg. I (in general): If by reasoning the intellect advances from mere implicit to explicit knowledge, reasoning is a source of knowledge. But by reasoning the intellect advances from mere implicit to explicit knowledge. Therefore—

Maj.: For knowledge is the reproduction in the intellect of objective reality.

Min.: The knowledge which is possessed before the formal act of reasoning is expressed in the premises taken separately, for the united premises constitute formal reasoning. In the conclusion we know actually what is contained only

[1] Mill, *Logic,* vol. 1, p. 206; Spencer, *Psych.,* vol. 2, p. 99; *cf.* Coffey, *The Science of Logic,* vol. 1, p. 403.
[2] Rickaby, *First Principles,* p. 105.

virtually in the premises taken separately. Thus, in the syllogism: "Men are animals. (Peter is a man). Therefore Peter is an animal," without the minor the major could stand, and the conclusion be false. With the minor I obtain new knowledge.

Arg. II (in particular): (a) **Deduction** is a source of knowledge, if by Deduction we can come to know relations between things, which before were unknown, but by Deduction we can come to know relations between things, which before were unknown. Therefore—

Min.: (1) In pure reasoning, we come to know relations between abstract ideas, which relations are not immediately evident, *e.g.*, conclusions of pure mathematics.

(2) In experimental reasoning, we acquire a knowledge of the qualities of bodies and of species. We can come to the knowledge of qualities, etc., in a certain body, although we never experienced them in that body.

(3) In mixed reasoning, it becomes evident that the same relations exist between concrete things as between abstract ideas, *e.g.*, "A new being demands a cause for its existence. but this house is a new being. Therefore this house demands a cause for its existence."

(b) **Incomplete Induction** is a source of knowledge, if physical and moral laws can be discovered by the aid of incomplete Induction. But physical and moral laws can be discovered by the aid of incomplete Induction. Therefore—

Min.: Laws of gravitation, of motion, etc., have been discovered in this way.

Proof of the second part of the thesis (certain knowledge):

(a) **Deduction: Arg. I.** For certain knowledge, it is sufficient that the intellect perceive: (1) that the premises are certain; (2) that there is a connection between the premises and the conclusion. But in Deduction both can be perceived. Therefore—

Min.: (1) The premises are either immediately or mediately evident. If immediately evident, there is no difficulty. If mediately evident, we prove the premises until we come to premises that are immediately evident.

(2) The perception of this connection is immediate, else there would be an endless inquiry. Hence, if we suppose the aptitude of the intellect for attaining truth and the intellect's attention to the form of reasoning, the connection can be perceived.

Arg. II. That is certain which cannot be denied without denying the principle of contradiction. But in Deduction, when the premises are certain and the consequence valid, the conclusion cannot be denied without denying the principle of contradiction. Therefore in Deduction the conclusion is certain, when the premises are certain and the consequence valid.

Min.: One who would admit that two things are equal to the same third thing, and yet deny that they are equal to each other, would deny the principle of identity. But the principle of identity is the principle of contradiction applied to the syllogism. There-

fore he would deny the principle of contradiction.

N.B.—The premises are merely propositions (judgments) drawn from the various sources of knowledge, mediate or immediate; and from the conditions laid down in the various sources we can know whether or not the premises are certain.

The validity of the consequence can be seen either immediately (as in easy and obvious syllogisms, *e.g.*, Barbara), or by the application of the rules of the syllogism.

Arg. III. In every syllogism materially true and formally correct, the major contains the conclusion and the minor furnishes proof of the fact. Therefore, if the conclusion were false, the major would at the same time be true and false, which is absurd.

(b) **Incomplete Induction**: That process which *can be reduced* to deductive reasoning is a source of certain knowledge. But incomplete Induction is a process which can be reduced to deductive reasoning. Therefore—

Maj.: The reduction does not change the force of the process. Deduction gives rise to certitude; hence, also, the process which can be reduced to Deduction. We do not say: "*must be* reduced"; for, to justify the value of Induction, it suffices if it *can be* reduced.

Min.: Induction can be reduced to three syllogisms (mixed), whose majors are analytic judgments, and whose minors are judgments

expressing facts either immediately or mediately evident from experience.

First major: A note which is constantly found in an object, no matter how varied the external circumstances, arises from something intrinsic to the object.

This is evident from the principle of sufficient reason. For the note is constant; hence, the reason for this note should be constant. The external circumstances are varied, and the accidents of the object are not constant. Therefore the reason for this constancy should be intrinsic to the object.

Second major: A note which arises from something intrinsic to the object pertains to the nature of the object. This is evident from the definition of "nature."

Third major: A note which pertains to any nature is found in every individual possessing that nature.

N.B.—In this polysyllogism, the conclusion legitimately follows from certain premises.

Cor. 1: Hence, when one sees that the premises are certain and the consequence valid, he cannot deny the conclusion. How do we know that the consequence is valid? A new reasoning process is not required, else there would be an endless series of reasoning. Nor is a new judgment required, else every act of reasoning would be composed of four judgments. A simple apprehension suffices. The correctness of the consequence can be immediately evident. *Cf.* proof of the second part of the thesis, (a).

Cor. 2: The certitude of the conclusion viewed *formally* is metaphysical; for the nexus between the premises and the conclusion is absolutely necessary.

Viewed *as a proposition,* the conclusion follows the lower grade of certitude found in the premises. Hence, in pure reasoning, the certitude of the conclusion, as a proposition, is metaphysical; in experimental or mixed reasoning, the certitude is either physical or moral. Of course, if even one of the premises is only probable, the conclusion is only probable.

Cor. 3: When one knows a universal proposition, he does not thereby *actually* know all the propositions implied in it. Such are known only *virtually.* Thus, one might know the universal proposition: "All bodies attract each other"; but he might doubt whether stars were bodies. He would not know actually that stars attract each other. He would, however, know that truth *virtually;* for if from some other source he learned that stars were bodies, he could, by the mere intellectual process, deduce the conclusion: "Therefore stars attract each other."

Cor. 4: Induction is not based upon metaphysical nature, for experimental facts refer to nature as it is in the concrete. Induction may be based on physical nature, and such Induction is used in the natural sciences within the order of necessary causalities; or on moral nature, that man does generally conform his conduct to the dictates of reason in matters of primary principles; and this Induction is used by sociologists, strategists, lawyers, etc.

Cor. 5: The reason why, having obtained a few properly tested instances, we infer a general statement, is that in these few instances we have segregated or abstracted the *cause,* and we know that the world in which we live is a world in which like causes are con-

stantly producing like effects. In other words, we perceive the antecedent and consequent to be related as cause and effect. But yet more. We perceive that the antecedent is cause by reason of something inherent in its very nature; for we have made our observations, tests, experiments, abstracting from it everything but its essential, inherent nature. But the essential, inherent nature of that thing must be present always where the thing is; the same yesterday, to-day, to-morrow. Hence, we conclude that the same thing will produce the same effect to-morrow as to-day. We formulate a universal law which reaches to the future.

Therefore, the judgment: "The future will resemble the past," is not a mere subjective persuasion arising from custom, as Hume thought; nor does it arise from a blind instinct of nature, by which we are moved to formulate that judgment, as Reid, Hamilton, etc., claimed; but it is based upon the perceived objective reality of the principle of causality and upon the perceived essences of things.[1]

Cor. 6: Induction must be carefully distinguished from *Analogy*. The former passes from the particulars of a class to *all* contained in that class, and gives rise to certitude; the latter passes from particulars to other particulars which, because of some proportion, are thought to possess a like property. Analogy gives rise only to *probability*. It is, however, of value in suggesting experiments or observations that may lead to more positive conclusions.[2]

Great caution is needed in accepting conclusions based upon these forms of argumentation, for it is very easy to mistake an *accidental* for a *necessary* connection, be-

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[1] Poland, *Laws of Thought*, p. 75; Turner, *Lessons in Logic*, p. 216; Dubray, *Intro. Phil.*, p. 254.

[2] Joyce, *Prin. of Logic*, pp. 259 and 358; Mahony, *Essentials of Formal Logic*, p. 83; Shallo, *Schol. Phil.*, p. 79.

tween antecedent and consequent; an *occasion* or *condition* for a *cause,* etc.

Cor. 7: Complete Induction gives certitude, but it is an immediate inference (by abstraction) rather than strict reasoning. It does not lead to scientific knowledge, *i.e.,* the knowledge of a strictly universal conclusion embodying what can be called a law. And the reason is evident. The conclusion expresses a simple addition of instances, and is, therefore, simply a collective proposition whose subject is an actual whole. The strict universal is no mere actual collection; it is applicable to an *indefinite* number of instances. Therefore this kind of Induction does not put us in possession of *scientific* or *necessary* truth.[1]

Schol.: Hypothetical reasoning also gives rise to certitude. The certitude of the premises can be known from the various sources of knowledge. And if one admitted the premises and denied the conclusion, he would deny the principle of sufficient reason. In the major, it is admitted that the condition (antecedent) is a sufficient reason of the consequent. In the minor, it is said either that the condition is fulfilled or that the consequent is not present. Hence, one who denied the conclusion would affirm and deny that the condition was a sufficient reason of the consequent.

Difficulties:

(1) The memory is not infallible. But reasoning depends upon memory. Therefore—
Answer: Formal reasoning does not depend upon memory, for memory is not needed to perceive the identity or diversity of the ideas; nor does the certitude of the premises depend upon memory when the premises are immediately evident. How-

[1] Coffey, *The Science of Logic,* vol. 2, p. 29; Clarke, *Logic,* p. 370.

ever, the certitude of the premises does, at times, depend upon memory when the premises are only mediately evident, for in this case we must recall the fact that their certitude was previously evident. But memory leads us into error only by accident, not of its nature.

(2) The conclusion is necessarily supposed in the major. Therefore every syllogism is a *petitio principii.* Take, for instance, the syllogism: "Every man is mortal; but Socrates is a man; therefore Socrates is mortal." The major cannot be held as certain, unless I am certain that every individual man (including Socrates) is mortal. Thus argues J. St. Mill.[1]

Answer: The conclusion is necessarily supposed *logically, i.e.,* should be actually known, *we deny;* is necessarily supposed *ontologically, i.e.,* should be actually true, *we admit.* Reasoning has to do, not with the facts as they are in the real order, but with our knowledge of the facts.

The true universal proposition relates, not to a collection of observed instances, but to the nature regarded in the abstract. It is erroneous to say that the whole inference is finished, when we have asserted the major premise. The major premise may be well known to us, while through ignorance of the minor, we may be unaware of the conclusion. Or, it may happen that I know both the major and the minor premise, and yet may be ignorant of the conclusion. For unless I think of the two premises *together*—unless I make the *synthesis*—I may never reach the conclusion involved in them.

It is quite possible, therefore, for the intellect to be in possession of the materials which yield the

[1] *Logic,* bk. 2, c. 3, n. 2.

conclusion, without knowing the conclusion itself. No one will deny this possibility, unless he fails to distinguish between the objective reality itself, the objective things, facts, events, on the one hand, and the intellect's subjective insight into them, on the other.[1]

(3) One who reasons either knows what he seeks, or not. If he knows, it is absurd to seek it; and if he does not know what he seeks, the search is useless, for he will not know it when he discovers it. Thus Deduction resembles the search for a runaway servant whom you do not know. You will not know him even if you meet him.

Answer: The disjunction is not complete. A third member is: "or he knows it virtually, though not actually." It would be absurd for a man to seek a truth which he knows perfectly and distinctly; but not if he knows the truth only imperfectly and implicitly. As regards the example, there is no comparison; for a runaway servant does not make himself known, whereas a truth manifests itself.

(4) Induction, by which we wish to know physical laws, involves a *petitio principii* and an endless regress. For to know the physical laws by Induction, we must suppose the trustworthiness of our senses. But the trustworthiness of our senses is itself a physical law. Therefore it must be sought by Induction, which again supposes the same trustworthiness or the same physical law, and so on indefinitely.

Answer: We grant that for Induction we must suppose the trustworthiness of our senses; but *we deny that this trustworthiness is merely a physical*

[1] Joyce, *Prin. of Logic*, p. 198; Coffey, *The Science of Logic*, vol. 1, p. 409

law known by Induction. The argument for the trustworthiness of the senses is taken from the connection which exists between a faculty and its proper effect. From internal and immediate external experience it is evident that the nature of the senses is to represent things. Then, from the third source of knowledge, it is immediately evident that the senses are, of their nature and generally, trustworthy.

(5) Induction is invalid, because the conclusion is broader than the premises.

Answer: Induction does not violate the laws of the syllogism by drawing a conclusion that is broader than the premises. The argument for Induction is: "What is constantly found in a number of objects pertains to the nature of the object, and what pertains to the nature is always found in that nature. But this note is constantly found in many. Therefore—"

In this process, no term is broader in the conclusion than in the premises. Hence, it is not simply a transition from one or many to all, but a transition from one *constancy* to another necessarily connected with it.

Induction

Scientific Induction comprises the following steps:

(1) **Observation:** Certain facts or phenomena presented to the senses are observed. These facts may become known either by observation in the course of *Natural Occurrences,* or by observation of what happens as the result of *artificially* arranged experiments.

(2) **Hypothesis:** A hypothesis is a supposed cause of a phenomenon provisionally selected with a view of eventually ascertaining the true cause of the phenomenon in question.

A hypothesis to be admissible must be:

(a) Possible.

(b) It must explain all the main facts of experience in the case.

(c) It must not either in itself or in its consequences contradict any other certainty, known fact or law.

(3) **Verification:** Verification is that process by which the investigator tests whether the supposed cause (hypothesis) is the real, true cause of the phenomenon under consideration. *Verification is the kernel of the whole process of Induction.*

(4) **Generalization:** The process of generalization is based upon the rational assumption that constant phenomena must have their sufficient reason in the *fixed* nature of an active cause. This constant way of action inherent in the nature of causal agencies is called *The Law of the Uniformity of Nature.*

What is the rational explanation of this mental process from the particular to the general? It certainly needs justification. This justification cannot rationally rest upon experience itself. Experience at best extends to only a few cases. Hence, Empirical and Positivist Philosophy, which teach that all knowledge is confined to experience, *that the world outside experience is unknowable,* utterly failed to justify their own pet form of reasoning, Induction.

According to Scholastic Philosophy the ultimate justification of the *Law of the Uniformity of Nature* rests on the will of an all-wise Creator, Who has endowed physical agencies by His free will with regular, constant modes of activity.[1]

Methods of Scientific Induction—for finding out the cause of a natural phenomenon:

(1) **Method of Agreement:** "If two or more instances of the phenomenon under investigation have only one circumstance in common, the circumstance in which alone all the instances agree is the cause (or effect) of the given phenomenon." For instance, ABC is followed by abc, ADE by ade, AFG by afg—then A is the cause of a.

Principle: Whatever can be eliminated from the phenomenon cannot be part of the cause.

(2) **Method of Difference:** "If an instance in which the phenomenon under investigation occurs and an instance in which it does not occur have every circumstance in common save one, that one occurring only in the former: the circumstance in which alone the two instances differ is the effect or the cause or an indispensable part of the cause of the phenomenon." For instance, ABC is followed by abc, BC by bc—then A is the cause of a.

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[1] Mahony, *Essentials of Formal Logic,* p. 77; Joyce, *Prin. of Logic,* pp. 310 and 354; Coffey, *The Science of Logic,* vol. 2, pp. 44 and 240.

Principle: Whatever cannot be eliminated without prejudice to the phenomenon must be connected with it in causation.

(3) **Method of Residues:** "Subduct from any phenomenon such part as is known by previous inductions to be the effects of certain antecedents, and the residue of the phenomenon is the effect of the remaining antecedents." For instance, if it is known by previous inductions that ABC is invariably followed by abc, and we further discover that B is the cause of b, and C is the cause of c, it follows that A is the cause of a.

Principle: Given that the total result is due to a certain number of antecedents, and a certain part of the result is due to a certain part of the antecedents, the residue of the result must be due to the remainder of the antecedents.

(4) **Method of Concomitant Variation:** "Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon, or is connected with it through some fact of causation." For instance, A1, A2, A3 are variations of the antecedent phenomenon and a1, a2, a3 are variations of the consequent, and if we find that A1BC is followed by a1bc, A2BC by a2bc, A3BC by a3bc, and then A is the cause of a.

Principle: This method is in principle akin to the Method of Difference. When a phenomenon cannot be made to disappear altogether, but occurs in different degrees of intensity or in different quantities, the corresponding variations in another phenomenon are an indication that there is a causal connection.

Criticism of these Methods: From the point of view of philosophical criticism, the most important consideration is this: Mill wrongly contends that in Induction we argue from particulars to a new particular instance. An explanation of his own Methods shows clearly that unless we admit, as Mill does not, the power of the human intellect to abstract general principles from individual facts, we cannot by the aid of these Methods establish a general truth, such as that "A" is everywhere and always the cause of "a."[1]

These Methods are a most valuable contribution to the course of human discovery and scientific research. . . . A just appreciation of Incomplete Induction is necessary if we are to keep pace with development of scientific research. We should

[1] Clarke, *Logic*, p. 389; Turner, *Lessons in Logic*, p. 231; Joyce, *Prin. of Logic*, p. 320.

not be so easily taken in by the hasty generalizations of the modern scientist, if we had the use of these Methods and the kind of certainty that may be derived from them at our fingers' ends. . . . We must always be on our guard against allowing ourselves to be persuaded into a conviction of the truth of some general hypothesis when the concurrent evidence is not sufficient of itself to establish it.[1]

Clarke, *Logic*, p. 398.

THESIS XV

"Human Historical Testimony, Whether Oral or Written, Is, Under Proper Conditions, a Source of Certain Knowledge in Regard to Contemporaneous and Past Events"

The sources of knowledge thus far considered have given certain knowledge in different orders of things: consciousness, as regards present internal facts; sensation, as regards corporeal things which exist outside us; intellect and reasoning, as regards essences and properties of things. All these sources, moreover, exist within us. Now we shall consider the fifth and last source of knowledge, a source outside of us, namely, testimony.

From the thesis it will be seen that testimony constitutes a *new* source of knowledge, for from testimony we obtain knowledge that could not be obtained from any other source. "There is a simple fact that plays a marvelous part in the planting and the growth of human knowledge. It is that man accepts the testimony of man. If all men were to refuse absolutely and in all cases to believe upon the testimony of others, society would be an utter impossibility."[1] Testimony apprises us of many facts not falling under our personal observation, whether they happen in our own time, or had place before we were ushered into existence. The truth is simply believed upon the authority of the witness giving testimony.

In view of the persistent misrepresentation of Scholasticism as teaching that even in the domain of purely rational truths authority is the ultimate basis of human

[1] Poland. *The Truth of Thought*, p. 184; Vaughan, *Truth and Folly*, p. 47; Shallo, *Schol. Phil.*, p. 97.

certitude, we can only repeat the genuine teaching of Scholasticism that "in philosophy, the argument based on human authority is the weakest of all arguments." (St. Thomas, *Summa Theol.*, I, q. 1, a. 8, ad. 2).

A **witness** is one who communicates his knowledge to another.

(1) An **immediate witness** is one who testifies to what he obtained by his own senses or understanding. In regard to historical testimony, such a one is called an "ocular" witness.

(2) A **mediate witness** is one who testifies to the knowledge received from others. Such a one is called a "hearsay" witness.

(3) A **contemporary witness** is one who lived at the time the event occurred.

(4) A **remote witness** is one who lived after the event to which he testifies.

Testimony is the communication of knowledge by a witness.

(a) In regard to the *matter* communicated, testimony is either doctrinal or historical.

(1) **Doctrinal** (dogmatic), *i.e.*, when the witness communicates a doctrine or theory, *e.g.*, a principle of science proposed for acceptance by belief.[1]

(2) **Historical**, *i.e.*, when the witness testifies to some event, to a concrete individual fact of experience. Such facts can be perceived by sight or some other external sense.

We say testifies to or narrates a fact, for if one demonstrates a truth, he is a teacher. One may, however, testify to a truth, but in this case the truth is taken more as a fact. Thus,

[1] Poland, ib., p. 191. For different kinds of facts, *cf.* Poland, p. 186.

a pupil may accept some statement of his teacher.

(b) In regard to the *manner* in which this knowledge is communicated, testimony is either oral or written.

(1) **Oral,** when the knowledge is communicated by word of mouth.

Oral Tradition is the uninterrupted series of oral witnesses, some of whom belong to the present time and others to the time of the event to which they testify.

It is only, of course, in regard to facts of very great moment to some nation, or section of the human race, or to the race as a whole, that we actually have uninterrupted oral tradition. Again, such tradition can assure us only about the *substance* of such facts, not about *minor details;* in regard to these latter, oral tradition naturally and inevitably fluctuates: the very nature of this mode of narrating and transmitting knowledge from generation to generation involves imperfections and limitations of this kind.[1] Moreover, the tradition must be widespread, self-consistent or uniform, as well as continuous.

(2) **Written,** when the knowledge of an event is inscribed in books, on monuments, etc.

A **monument** is a work of human industry by whose aid the memory of an event is transmitted to posterity, *i.e.,* buildings, statues, coins, medals, etc. It includes all those more enduring works of human art and industry, the very existence of which leads us neces-

[1] Coffey, *The Science of Logic,* vol. 2, p. 258.

sarily to argue to the reality of certain events with which they must have been connected.

N.B.—In our thesis we are speaking merely about *human* testimony, *i.e.,* when the witness is a man speaking on his own human authority. For if the witness is God, or a man speaking as God's representative, the testimony is *divine*.

The **authority** of a witness is the force or weight which he has to move the hearer or reader to assent to the fact. It is based upon the *knowledge* and *truthfulness* of the witness, *i.e.,* does the witness know the fact as it is, and, does he transmit it as he knows it?

The assent given to testimony is called *belief,* in contradistinction to *science.* "Belief," then, is "The intellectual assent to the fact narrated, not because of intrinsic evidence of the fact, but because of the authority of a witness." To believe a witness, we must have evidence of his knowledge and truthfulness; evidence that he is not deceived himself, nor deceiving us. Thus, we do not believe on the evidence of the truth proposed. We do not perceive its evidence. We believe upon the evidence of the credibility of the witness. This credibility of the witness, attached to the objective truth, stands to us extrinsically for the evidence of the truth testified to.[1]

The assent should be in proportion to the ascertained value of the testimony. If in excess of this, it is not belief, but "credulity." Manifestly, there is often very large room for the exercise of prudence, discretion and judicious discrimination, in convincing ourselves of the presence of these two necessary conditions. Therefore, one's assent may vary from mere opinion to strict moral certitude.

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[1] Poland, *The Truth of Thought,* p. 185.

The motive for *scientific assent,* on the other hand, is intrinsic evidence. It is something understood or seen *in* the truth or fact itself. Science tells us that the fact is so and why it is so; belief merely tells us that the fact is so. Moreover, science is universally understood to be a knowledge primarily of *universal truths* or *laws,* and of facts only as embodying and exemplifying these; whereas belief on authority is primarily and mainly an assent to individual truths of fact, irrespective of the laws embodied in these latter.

We cannot appeal to authority in *scientific research.* In science, where our aim is to reach *scientific* certitude, such an appeal is the weakest of all arguments. Human authority in matters of science is only a "confirming criterion" of truth and certitude.[1]

The principles on which we base our trust in human testimony are the *moral laws* which govern human action. These laws, as far as they concern us here, are:

(1) Every man naturally desires to know the truth, especially in regard to matters of general importance, or which greatly affect his interests.

(2) A lie, *of itself,* is neither good, useful, nor pleasurable to human nature, but repugnant to it. "No one lies gratuitously," and much less will he lie for the purpose of bringing trouble and ruin upon himself. Man by nature loves truth, and turns aside from it only under the hope of obtaining some advantage or gratification.

(3) Self-defence, *i.e.,* no one, if he has the power to prevent it, will permit the spreading of a lie which is harmful to himself or to his kin.

We say in our thesis "Under proper conditions"; for, if there is question of *oral testimony,* we must be

[1] Coffey, *The Science of Logic,* vol. 2, p. 251.

certain of the *meaning,* of the *knowledge* and of the *truthfulness* of the witness or witnesses. Hence:

(1) For **immediate** testimony—when there are many witnesses—these conditions should be fulfilled:
   (a) The fact narrated must be sensible, public, easily known, of great importance, *e.g.,* a war, flood, great fire, destruction of a city, etc.
   (b) The witnesses should agree, at least as regards the substances of the fact or event.
   (c) The witnesses should be independent, *i.e.,* there should be no collusion. This independence can be assured, if the witnesses are of different nations, languages, conditions of life, customs, etc. The more differences there are, the more certain is the independence.

(2) For **oral tradition:**
   (a) The fact should be public, sensible, easily known, etc., both for those who give and those who receive the testimony.
   (b) The tradition should be through *many independent* lines. Thus, for example, A, B and C are immediate witnesses; A narrates the event to D, D to E, E to F; B narrates the event to M, M to N, N to O; C narrates the event to S, S to T, T to U; F, O and U narrate the event to me.

If there is question of *written testimony,* we must be certain not only of the meaning, of the knowledge and of the truthfulness of the writer, but also of the *authenticity* and *integrity* of the document.

(1) The **authenticity** (genuineness) of a document consists in this, that it has been written by the author whose name it bears; or, if the author is unknown, that the document pertains to that period to which it is assigned. If the document is ascribed

to one who is not the author, it is called "spurious."

(2) The **integrity** of a document consists in this, that at least as regards the substance of the document, the document is as the author wrote it, *i.e.*, no parts added or subtracted. Otherwise the work is said to be "corrupt."

Parts to be proved in the thesis:

(1) Oral testimony is, under proper conditions, a source of certain knowledge in regard to contemporaneous events.

(2) Oral testimony is, under proper conditions, a source of certain knowledge in regard to past events.

(3) Written testimony is, under proper conditions, a source of certain knowledge in regard to past events.

Written testimony in regard to contemporaneous events is not treated separately, because if the third part of the thesis is true, the conditions can be more easily verified for written testimony in regard to contemporaneous events.

Proof of the first part of the thesis: If we can be certain of the knowledge and truthfulness of the witnesses, oral testimony is a source of certain knowledge in regard to contemporaneous events. But we can be certain of the knowledge and truthfulness of the witnesses. Therefore—

Maj.: Evident. For, if men really know the fact, and truly communicate their knowledge to me, it is a contradiction in terms to say that what they communicate to me is false, or that I can err in assenting to it.

Min.: (a) We can be certain of the witnesses' *knowledge,* for it is certain that men's faculties

are reliable when properly disposed and rightly applied.

(1) We can be certain that men's faculties are *properly disposed,* when the witnesses are many, the event unusual and of great moment, *i.e.,* public, of general importance and easily perceptible, etc.

(2) We can be certain that men's senses are *rightly applied,* when the event is unusual, easily perceived, and its knowledge of importance to the witnesses and others. Otherwise we must deny man's natural desire for knowledge and regard for his personal interests.

(b) We can be certain of the *truthfulness* of the witnesses, when they are known from other sources to be upright, honest and truthful; when the witnesses are many; when their testimony involves loss of life, fortune or reputation; when the witnesses can have no common motive in deceiving us; etc.

Proof of the second part of the thesis: If we can be certain of the knowledge and truthfulness of the immediate and mediate witnesses, oral testimony is a source of certain knowledge in regard to past events. But we can be certain of the knowledge and truthfulness of the immediate and mediate witnesses. Therefore—

Maj.: For then the testimony of the witnesses is authoritative. *Cf.* also proof of the major of the first part of the thesis.

Min.: If the witnesses are *immediate,* we can be certain of their knowledge and truthfulness, as is clear from the first part of the thesis.

What the *mediate* witnesses testify to is the testimony of all the immediate witnesses. Hence, as is clear from the first part of the thesis, we can be certain of the knowledge and truthfulness of the mediate witnesses in regard to this point.

Proof of the third part of the thesis: Written testimony is a source of certain knowledge in regard to past events, if we can be certain: (1) of the knowledge and truthfulness of the author; (2) of the authenticity and integrity of the work; (3) of the true meaning of the author. But we can be certain of these. Therefore—

Min.: (1) (a) We can be certain of the author's *knowledge,* when the event is of great moment, easily perceived, and of some importance to the author.

(b) We can be certain of the author's *truthfulness,* when the author is known from other sources to be truthful and upright; when the event is of great moment and known to many, so that a lie would be immediately detected; when the testimony involves loss of fortune, life, etc.; when the testimony is detrimental to enemies and yet they do not deny the fact; etc.

(2) (a) We can be certain of the *authenticity* of the work: (1) from *internal evidence, i.e.,* its style as compared with the style of works that are certainly genuine; the agreement of its contents with the time and place at which it is supposed to have been written; the agreement of its contents with the author's views and opinions, language, style, etc.; (2) from *external evidence,*

i.e., the testimony of other writers, oral tradition, the silence of those who would be interested in denying its authenticity, etc., all of which shows that a well-founded public opinion assigns the work to a certain author.

N.B.—Only external evidence strictly proves the authenticity of a work; of itself, internal evidence is seldom conclusive, and merely proves that the work could be that author's; for it is absurd to suppose that the author will always use the same style, never change his opinions, etc.

However, if there is internal evidence in favor, and no external evidence against it, there should be no doubt about the authenticity.

(b) We can be certain of the *integrity* of the work, when the style is uniform even in details; when the work is of such importance that either friends or enemies would oppose interpolations or mutilations; by the multiplicity and agreement of independent editions; by the comparison with manuscripts; etc.

(3) We can be certain in many cases of the author's *meaning* (*i.e.*, the meaning the author himself intended), when the language, idioms, etc., are understood. In case of doubt, reference can be made to other sciences, *e.g.*, history, philology, etc., which will help in the interpretation.

N.B.—(1) If there is only *one* witness, a man's prudence, honesty and truthfulness may, at times, be so well known to us by experience, that it would be not only unreasonable, but even unjust, to doubt his veracity in a serious matter, especially when it is clear from the circumstances that our witness has nothing to gain, but, on the contrary, much to lose, by his testimony to the fact. *Ordinarily,* however, we have only *practical* certitude from the testimony of a single witness.[1]

From the mere fact of a witness's truthfulness in the past, we cannot be certain of his truthfulness in the present; for man is always free.

(2) The argument from the *silence of a witness,* or the *negative argument* as it is called (from the fact that contemporary writers say nothing about an event), has value only when the following conditions are *both* verified: (a) when the event is such that the witness could not be ignorant of it; and (b) when the witness would certainly have mentioned the fact had he known it. The argument from the silence of writers proves the non-existence of the event; but, for the most part, it is very difficult to be sure of these conditions.

Cor. 1: The certitude arising from human testimony is, of itself, *moral* certitude. It is moral certitude in the strict sense, actually excluding falsity and all prudent fear of error.

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[1] Mercier, *Logic,* n. 114; Coffey, *The Science of Logic,* vol. 2, p. 262; Shallo, *Schol. Phil.,* p. 100.

The certitude arising from human testimony can be reduced to *metaphysical,* if the fact is testified to as one that is public and patent, by entire peoples in the affairs that concern their national life, etc.; for otherwise we would have to admit an event without an adequate cause, which is metaphysically impossible.

Cor. 2: We do not claim that testimony *always* gives rise to certitude. At times, the circumstances are such that we are not justified in giving a firm assent.

Cor. 3: Testimony can never be the ultimate motive of certitude. My assent in this case must always be based upon two other assents to the two judgments: "my informant is not deceived" and "he is not deceiving me." Hence, we must ultimately have *intrinsic* evidence for the presence of these two qualities in some testimony of the series, else we would have an endless inquiry.

Difficulties:

(1) Lack of agreement among witnesses shows that we cannot be certain.

Answer: Witnesses can and do differ as regards *minor* details. Such differences, however, do not destroy, but rather increase, the authority of the witnesses; for they show that there was no collusion. The agreement of the witnesses renders a lie *morally* impossible.

(2) The testimony of a single witness gives only probability, therefore many witnesses give only probability; for you have only the testimony of individuals.

Answer: The testimony of a single witness generally gives only probability, *we grant;* always gives only probability, *we deny.*

We can also deny the inference and added reason. The testimony of many individuals is not merely a

collection of probabilities. From such testimony we have more than probability; for in this testimony there is a new element (and a new motive for assent) which demands a sufficient reason. This new element is the *agreement of independent* witnesses, and the only sufficient reason to account for this element is the truth of the fact or event.

(3) Oral tradition, of its very nature, alters facts: minimizing some, amplifying others, etc.

Answer: This might happen as regards facts of minor importance, or as regards minor details of important, well-known facts, *we grant;* as regards the substance of these latter facts, *we deny. Cf.* conditions mentioned in the thesis.

(4) J. Locke has said: "A credible man, vouching his knowledge of it (*i.e.,* the original truth), is a good proof; but if another equally credible do witness it from his report, the testimony is weaker; and a third that attests the hearsay of a hearsay, is yet less considerable. So that, in traditional truths, each remove weakens the force of the proof; and the more hands the tradition successively passed through, the less strength and evidence does it receive from them."[1]

Answer: We do not deny that, as a general rule, the authority of the testimony decreases as the number of intermediate witnesses increases. For error might more easily creep into the testimony, and the difficulty of verifying the knowledge and truthfulness of the witnesses is increased. Nevertheless, there can be cases when the knowledge and truthfulness of the witnesses are so patent (*cf.* conditions in the thesis), that all prudent doubt is excluded as regards the substance of the fact. This

[1] Essay, iv, c. 16, 10.

is what our thesis defends. Moreover, time does not enter into the value of the testimony: some facts become better known in the course of time.

We must note, however, regarding the first part of the quotation, that if the second witness is *equally credible,* there is no reason why his testimony should be considered weaker.

(5) No writer presents facts as they actually occurred.
Answer: This might be true as regards accidental or minor details, *we grant;* as regards the substance of the fact when the conditions mentioned in the thesis are present, *we deny.*

(6) The fulfillment of the conditions for testimony can be known only by testimony. Therefore a vicious circle.
Answer: We deny the antecedent. For, as regards the immediate witnesses, we can know by experience and reason that the conditions have been fulfilled.

(7) Testimony is not a source of knowledge; for it is from reasoning that testimony derives its power to give certitude.
Answer: Reasoning is required as a condition for testimony to exercise its force; but reasoning is not the source of knowledge. We admit that testimony is not a source of knowledge entirely independent of the other sources. It is, however, a source distinct from the others.

PART III

The Ultimate Criterion of Truth

It is a matter of common experience that on many occasions we have rested assured in our possession of some truth. On other occasions, we have given only a limited assent when judging, through fear of being wrong. Something was lacking in the presentation of the truth to make us give an unwavering assent. At times, too, we discovered that we were, indeed, mistaken; that some, even of our firm, convictions were not true, but false; were not genuine knowledge, but eror. What then is the norm or standard by which we can distinguish truth from error, and what is the basic motive upon which we can rest our certain judgment about a truth? There should be such a norm and motive, because the intellect, having an aptitude for truth, should be able to distinguish truth from error and know that it possesses truth.

In the second part of Epistemology, we saw that there are five sources of true and certain knowledge. These sources, impelling assent and thereby distinguishing truth from error, are particular motives and particular norms. Thus, we might appeal to the trustworthiness of our senses as a reason for our knowing that some judgments are true. In the present treatise, we do not seek a new norm and a new motive beyond these particular norms and motives; but we seek the reason why these sources of knowledge have the character of criteria and norms. In other words: Is there a universal norm found in all these five, and upon which they are all based, and, if so, what is it?

Philosophers, in general, agree that we possess and practically have recourse to such general criterion. When, however, it comes to denominating this general criterion, philosophers disagree.

THESIS XVI

"The Universal Criterion of Truth and the Ultimate Motive of Certitude Is Objective Evidence"

A criterion (*kriterion*) is a standard by which to judge (*krinein*).

A criterion of logical truth is a norm or standard by which we judge such truth from falsity.

A particular (partial) **criterion** of logical truth is a criterion to be used for some particular domain of human knowledge.

The universal criterion of logical truth is that which is contained in every particular criterion and gives it the power of distinguishing truth from falsity.

A motive is that which, known, moves one to act.

A motive of certitude is that which, known, moves the intellect to give a firm assent without fear of error.

The ultimate motive of certitude is that to which we finally appeal, when urged to give a reason for our steadfast adhesion to a truth. It ought, of course, to be found in all the particular or less far-reaching motives.

The universal criterion of truth and the ultimate motive of certitude is not a new truth really distinct from the truth about which we are certain, otherwise there would be an endless regress. It is merely *a quality of that truth* by which it is manifested to the intellect as necessary, *i.e.*, whereby it makes itself accepted by the intellect and wins assent. Thus we say: "The thing is evident," "The evidence forces me."

Evident (*evidens*) and evidence (*evidentia*) are from

the Latin *evidere*, to see out of. A thing is evident when it is seen out of (out from) itself. Evidence is the capacity a thing has to be seen out of itself, by itself, from itself.[1]

Objective evidence literally belongs to the objects of sight, yet it is used of the objects of all our cognitive faculties, and may be broadly defined: "The intrinsic knowableness of an object clearly manifesting itself to a cognitive faculty." But, *with reference to the intellect*, objective evidence is: "The manifestation of a truth with such clearness as to make us see that it is so and cannot be otherwise"; or, "The objective truth revealing itself to the intellect so clearly as to compel assent"; or, briefly: "*The necessary intelligibility of a truth.*"

N.B.—(1) We must again call attention to what we mean by *truth* (objective truth). It is anything that will not imply a contradiction in its statement: it is any abstract principle or concrete fact, past, present, or future; or a mere possible. Even the act by which a fact, etc., is known can become objective truth with regard to another act of knowing.

(2) We must remember that evidence strictly belongs to the object, not to the intellect expressing the object. It is the object (truth, reality) which is evident. A proposition is said to be evident when mediately or immediately it so breaks upon the intellect as to irresistibly compel it to pronounce that the predicate must of necessity (absolute or hypothetic) be assigned to the subject; that, in other words, the truth is as stated and cannot be otherwise.

[1] Poland, *The Truth of Thought*, p. 177.

The manifestation of a truth might take place in various ways. Hence, the following divisions of evidence:

(1) **Metaphysical, physical,** or **moral,** according to the motives which manifest the truth.

(2) **Intrinsic** or **extrinsic,** according as we have the evidence of the truth in itself (immediately or mediately), or from testimony.

(3) **Immediate** or **mediate,** according as the objective necessity of uniting subject and predicate manifests itself to the intellect immediately or by reasoning. Immediate evidence is always intrinsic.

(4) **Objective** or **subjective.** As regards objective, *cf.* above. Subjective evidence is the clear perception which sees that the truth is so and cannot be otherwise. Subjective evidence is the effect of objective evidence.

When the term "evidence" is used without modification, objective evidence is always understood. In our thesis we treat of objective evidence, whether intrinsic or extrinsic, mediate or immediate, etc.

Proof of the thesis: That is the universal criterion of truth and the ultimate motive of certitude, which of itself compels the intellect to assent without fear of error, and which imparts efficacy to all other criteria and motives. But objective evidence of itself compels the intellect to assent without fear of error, and imparts efficacy to all other criteria and motives. Therefore—

Maj.: Evident from the definition of universal criterion and ultimate motive. We say: "which of itself," *i.e.,* that the power which it has of distinguishing truth from falsity and giving rise to certitude is not received from another criterion and motive.

Min.: (a) *Of itself compels the intellect to assent*

without fear of error: That of itself compels the intellect to assent without fear of error, which suffices and is required for the intellect to perceive that the thing is so and cannot be otherwise. But objective evidence suffices and is required for the intellect to perceive that the thing is so and cannot be otherwise. For, when there is objective evidence (the necessary intelligibility of the truth), the intellect perceives that the thing is so and cannot be otherwise; and without objective evidence the intellect does not perceive that the thing is so and cannot be otherwise. Therefore—

(b) *Imparts efficacy to all other criteria and motives:*

(1) The ultimate reason why I elicit a certain judgment, *e.g.,* "I am thinking," based upon the testimony of consciousness, is the necessary and manifest connection which these internal facts have with the testimony of consciousness.

(2) The ultimate reason of my certitude from the testimony of the external senses is the necessary and manifest connection of the object perceived by the senses with correct sensation.

(3 and 4):

The ultimate reason why I am certain of my judgments and reasoning is the necessary and (immediate or mediate) manifest connection of the predicate with the subject.

(5) Testimony gives rise to certitude because of the necessary and manifest

connection of the testimony with the truth to be admitted.

Cor. 1: Objective evidence, then, is the universal criterion, so that no judgment of any kind or on any subject can be accepted as true, unless it passes this test.

It is always to evidence, mediate or immediate, that we appeal when asked to give an account of our assents. To justify a statement, I may say: "It is because I see that it cannot be otherwise, because it clearly manifests itself." Or I may answer by a series of "becauses," the last of which will be something self-evident. Asking the reason of self-evidence would be tantamount to asking to light a candle in order to see the light of the sun.[1]

Since objective evidence is necessarily connected with truth, and cannot lead us into error, (a) no evident proposition can be false; and (b) no false proposition can be truly evident.

Cor. 2: There is only *one* universal criterion of truth and ultimate motive of certitude. That one and only one is, "The necessary intelligibility of a truth." The truths themselves are rightly divided into immediately or mediately, intrinsically or extrinsically, evident; and, according to the various kinds of connection between the motive and the truth, judgments are divided into metaphysically, physically, or morally, evident judgments.

Schol. 1: First principles cannot be the ultimate criterion of truth, for these principles are themselves truths, and, consequently, require a criterion. Hence, we do not say that objective evidence is the universal criterion because it is a first principle: "What is evident is true." The intellect can, indeed, express in a judgment the connection between a truth and its evidence, but objective evidence is a quality or characteristic.

[1] Dubray, *Intro. Phil.*, p. 412.

Schol. 2: The intellect cannot refuse assent to a truth that is immediately evident, for the intellect is a necessary faculty. Neither can it reject an object in which there is no semblance of falsity, otherwise it would be indifferent to its proper object when the latter is rightly proposed. Now in an object evidently true, there can be no semblance of falsity, nor is there present any reason which would move the intellect to assent to the opposite.

The intellect can, however, be influenced by the will in regard to *mediate* truths. For although it is true that when the premises are evident and the correctness of the reasoning process is perceived, the will cannot hinder the intellect from assenting; still, before the evidence shines in upon the intellect, the will can withdraw the intellect from the consideration of the object, or divert it to the consideration of other objects, even to the consideration of contrary reasons. Thus it happens that truth is obscured, a state of doubt is aroused, and falsity under the appearance of truth is admitted to the intellect.

False ultimate criteria:

(1) **Traditionalists** (de Bonald, Bautain, Bonetty, etc.), trying to refute rationalism, taught that no truth, at least any metaphysical or moral truth, could be known unless revealed and transmitted by tradition. Hence, according to them, the ultimate criterion of truth is divine authority.

Answer: This cannot be the ultimate criterion of truth, for to have a firm assent about divine revelation, we presuppose the certain knowledge about other truths, *e.g.,* that God exists and has spoken; that we exist and, besides having our senses in proper condition and capable of receiving such a revelation, that we have an intellect capable of understanding it; that other men exist

who were not deceived as regards the revelation, and are not deceiving us.

(2) **De Lamennais** was the ablest of the Traditionalists. He assailed the fundamental tenet of rationalism and endeavored to prove the inability of human reason to arrive at a knowledge of truth. De Lamennais held that the individual intellect could not attain certitude about anything; for the senses, consciousness, intellect and reason were sources of error. Hence, the only means of distinguishing truth from falsity is collective reason, or the common consent of mankind ultimately based on divine revelation to the human race.

Answer: In the first place, this doctrine is false as regards the sources of knowledge. As a criterion, too, it is false; for the authority of others cannot be obtained for many truths, *e.g.*, my internal acts. Again, we cannot see how men of thought, much less how ordinary folk, will gather a sufficient number of witnesses that would deserve the name of common consent.

Moreover, that anyone might admit a truth according to this standard, he should be certain that other men exist, that they agree on a truth, that he rightly understands their testimony, etc. And we must remember that an assent based upon authority, whether human or divine, presupposes two other assents: "my informant is not deceived" and "he is not deceiving me."

Finally, the doctrine of de Lamennais involves a contradiction; for, if the individual reason is essentially fallible, infallibility cannot be obtained by a collection of such reasons, since the intrinsic nature of a thing is not changed by an increase of numbers.

(3) **Thomas Reid** and the Scottish School of philosophers, trying to refute the scepticism of Hume, claimed as the ultimate criterion of truth "the blind instinct to believe," by which we are forced to admit certain principles without being able to give a reason for them. Such principles are called the principles of common sense.[1]

Balmes seems to favor this doctrine when he says: "We have various criteria; but they may all be reduced to three: consciousness, evidence, and intellectual instinct. . . . Intellectual instinct is the natural inclination to assent in cases which lie without the domain of consciousness and evidence."[2]

Answer: We do not deny that we possess a subjective power which might be called instinct. But we deny that it is the universal criterion and the ultimate motive of certitude, and we deny that it is a *blind* instinct. It is not the ultimate criterion, for I must first know that I possess this instinct, and that this instinct, at least under certain conditions, necessarily tends towards truth; otherwise I would not know whether I was led towards truth or error by it.

Moreover, such a criterion is contrary to the nature of the intellect, which cannot judge unless enlightened by some motive; for experience tells us that our intellect accepts nothing blindly.

Finally, Reid plays into the hands of his adversaries, the Sceptics, who claimed that certitude was unreasonable, since the intellect could not give a reason why it assented.

N.B.—In some parts of his works, however, Reid puts the criterion of truth where it ought to be, in evidence.[3]

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[1] Reid, *Works*, p. 108.
[2] *Fundamental Philosophy*, vol. 1, p. 237.
[3] Poland, *The Truth of Thought*, p. 175; Rickaby, *First Principles*, p. 208.

(4) **Sentimentalists** (Jacobi, etc.) said that the universal criterion of truth was a mere feeling, an affection of the soul, a natural benevolence towards truth, satisfaction in the possession of truth.

Answer: This would make certitude a very unstable thing, changeable regarding the same thing with every changing mood. It would depend on one's physical constitution, phantasm, prejudices, etc.

True, some people do yield to sentimental or affective morality, but unless they reason out their persuasions, they will be swayed by their emotions. And even if they remain firm in their feeling, an affective and sentimental state is far less worthy of man than a rational conviction, for the will should follow the light of reason.

Satisfaction is consequent upon the attainment of truth, and confirmatory of its possession; but it is not the primary indication of truth.

(5) **Galuppi** held that the "testimony of consciousness" was the ultimate criterion, etc.

Answer: The testimony of consciousness is a particular criterion, a criterion for present internal facts, inasmuch as they are modifications of the subject.

Consciousness is, indeed, *a necessary condition* for all kinds of certitude, but it is not the universal criterion; for, after consciousness has testified that I perceived something, it might be asked: "How do I know that I have rightly perceived it?"

(6) **Descartes** taught that the "clear and distinct idea (perception)" was the universal criterion of truth. (Med. III.) The clear and distinct idea which

Descartes postulated does not arise from the perceived object, but "from God." (Med. IV.)

Answer: Since the object is the measure of knowledge and of certitude, the intellect should be directed by the object and not vice versa. We admit that for certitude a clear apprehension of the objective motives of assent is required. Yet, a mere clear and distinct idea (subjective) cannot be admitted as the universal criterion, etc.; for an idea is a subjective representation of the object, and gives rise to true and certain knowledge only inasmuch as it is *conformed to the object*. We do, at times, say: "I assent because I clearly perceive it"; but by this we mean that our clear perception is the reason in so far as that perception includes an objective motive, *i.e.*, is determined by objective evidence.

(7) **Pragmatism** identifies the truth of a judgment with its utility; denies that truth in the sense of conformity of the judgment with reality is intellectually attainable; and holds that the *only and universal test* of the truth of a judgment, *i.e.*, of its real conformity or harmony with the veritable needs of human life and existence, is to be found by *living* it, by experiencing *how it works*, whether it *succeeds* by being assimilated, incorporated in the progressive current of human existence, or *fails* by being rejected and eliminated from among the beliefs that are found really helpful and beneficent.

Answer: We do not deny that truth is very useful to us; nor do we deny that in some measure the truth of a doctrine that has or ought to have a bearing on human conduct can be judged by its consequences. But we absolutely deny that every truth depends upon its utility or that utility can

be admitted as the universal and ultimate criterion of truth.

It is evident that the criterion of truth should be immutable and universal, for a changeable or relative criterion makes truth itself changeable and logically leads to scepticism. Now utility is neither immutable nor universal. Private utility cannot be admitted as a criterion of truth, for the same assertion can be very useful for one, and very harmful to another; and for the same man useful at one time, and harmful at another time. Nor can we have recourse to the common utility of mankind, for in very few questions is it possible for any man to discover whether a negative or an affirmative answer will be useful to mankind. And in those answers which we can discover, we can conclude to the truth not from the utility, but from truths known from other sources.

Moreover, that cannot be the universal and only test which cannot be known as such unless other things are previously known. Now the utility of a belief, its working-value, is unintelligible unless in refernce to an *end,* to a *known end,* to something *certainly known to be an end,* a good, a something really worthy of attainment. Hence, the pragmatist criterion of the *experienced success of a belief* in helping, perfecting, human existence will not itself "work," and cannot itself even begin to be applied, until *we know* whether human life has a purpose, whether there is a *good* towards which it moves, and *what* this good is.

This follows also from the very notion of "Method," which the pragmatists claim their

doctrine to be. For "Method" means a safe way at arriving at a definite goal. Hence, for one to construct and propose a method, he includes and supposes speculative knowledge of the means and the end to be attained.

Finally, granting that truth always *has* good results, it does not follow that it is *to be identified with them,* but rather that it is distinct from them as a cause from its effects.[1]

Difficulties:

(1) We often think that we have evidence for a truth, and later find that we were in error. Therefore evidence is not a true criterion.

Answer: In reply to the antecedent, we say that this cannot happen as regards truths that are immediately evident, nor in mediate judgments when there is proper care and attention.

"The false judgment is vitiated by want of due regulation, and this may be ascribed chiefly to two sources: prejudice and passion. Prejudice consists in the formation of opinions, due to interest or inclination, before the subject has been really examined. Thus the attention is misdirected and the judgment biassed, in a manner of which the individual is often in a great measure unconscious. . . . The same observations apply to passion, or the influence exerted by the moral feelings. . . . A man may frame any system for himself, and may rest in that system as truth; but the solemn inquiry is, not what opinions he has formed, but in what manner he has formed them. Has he approached the inquiry with a sincere desire to discover the truth; and has he brought to it a mind, neither misled by prejudice, nor distorted by the condition of its moral feelings; has he directed his attention to all the facts and evidence with an intensity suited to their importance? Truth . . . may elude the frivolous or prejudiced inquirer; and even when he thinks his conclusions are the result of much examination, he may be resting his highest concerns in delusion and falsehood."[2]

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[1] Coffey, *Epistem.*, vol. 2, p. 353.
[2] Abercrombie, *Intellectual Powers,* p. 250.

(2) In deciding disputes, we have recourse to the common consent of men; children recognize no other criterion; and we begin to doubt our own opinion when we hear that the common consent of men is against us. Therefore the common consent of mankind is the ultimate motive, etc.
Answer: This might happen in regard to truths that are not evident; but not in regard to evident truths. And even in regard to truths that are not evident, we do not appeal to other men as the ultimate motive. (*Cf.* false criteria, No. 2.)

(3) If the collective reason of men is not the criterion of truth, the individual has the right to follow his own reason in preference to the combined reason of men. But this is absurd. Therefore—
Answer: It would not be absurd for an individual to follow his own reason, if the individual clearly sees that something is true which other men, because of prejudice, etc., think is false. On the contrary, it might be absurd at times for the individual to follow the opinion of the crowd.

But it is impossible for such opposition to arise when the individual and others are using their reason rightly; for what is evidently true to one intellect, cannot be evidently false to the others, and vice versa.

(4) We cannot establish any true ultimate norm; for this would require another norm to distinguish it from false norms, and so on indefinitely.
Answer: A light does not need another light to be seen. Hence, we can establish a norm which, like a light, shines in upon the intellect by its own brightness.

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